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GTPORSCHE

JANUARY 2016 £4.50 Issue 170



BOXSTER SPYDER: 987 vs 981



2015's GREATEST PORSCHES

The Cayman GT4, 911 GT3 RS, Boxster Spyder and new 911 Carrera fight for our affections, but which comes out on top?



New 911 Driven

The truth about the new turbocharged Carrera

gtpurelyporsche.com
AN INDEPENDENT PUBLICATION



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Ignition



Simon Jackson
Editor @retro_jackson

2015 was a phenomenal year for Porsche. We were treated to a number of reasons to celebrate, not least amongst them the two remarkable cars on this month's cover: the latest 911 GT3 RS and the Cayman GT4. They emerged from Porsche's Motorsport department, which it seems can do no wrong of late, and immediately advanced the narrative of both the 911 and Cayman models considerably.

However, the GT series cars weren't the only exciting new Porsches to materialise this year. While it may not have been tweaked by Andreas Preuninger and his team in Weissach, the Boxster Spyder was another exciting new Porsche, and one which finally delivered to us the true performance Boxster we'd been waiting for since 1996 when the model first appeared. And, of course, then there was the new 911 Carrera. Turbocharged for the first time in the model's history, the second-generation 991 is one of the most important 911 variants in the car's evolution. For us these four represented the greatest new Porsche cars of 2015, and so you'll find us behind the wheel of each of them in this special celebratory issue. What's more our team of respected contributors have explained exactly which they find most appealing, and why (p44). Do you agree or disagree with their viewpoint? We'd love to hear from you through the usual channels.

With this retrospective look back at 2015, it's worth remembering that 2016 looks equally as bright for Porsche, providing the wake of the diesel scandal doesn't bite too hard – see pages 66 and 120 for more comment on that. Early next year we're expecting the face-lifted 981 Cayman and Boxster cars to arrive (most likely to be unveiled at the Geneva Motor Show) and they will both feature four-cylinder engines. Plus there's talk of a pared-back 911 designed with the purists in mind – a final swan song for the naturally aspirated 991? Perhaps. Porsche also has a knack of surprising us, so there is bound to be more to come, too, possibly even completely new models.

Contemporary Porsche metal aside, the increased interest in classic Porsches shows little sign of slowing down either, and happily there seems to be more praise being reserved for the front-engined cars as a part of that overall rise in popularity. Whether you're in favour of this amplified attention for Porsche cars or not, be it a result of hikes in values or not, there's no denying that there remains a growing audience interested in the brand, many of whom are new to it. The more the merrier, as they say.



The 991 GT3 RS was one of 2015's best new Porsches…

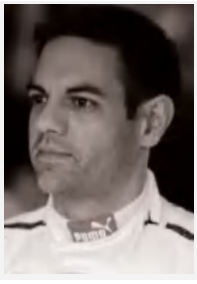
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Colin Goodwin
@Askgoodwin

A motoring journo for over 25 years, Goodwin writes for the Mirror *and has contributed to* GT Porsche *for a decade.*

This month: Colin chats GT3 RS, GT4 and Boxster Spyder. He also ponders the benefits of the 912 in his *Porsche Moments* column.



Jethro Bovingdon
@JethroBovingdon

One of the UK's most admired road testers, Jethro is a proficient racer and purveyor of oversteer – he currently owns a 996, too.

This month: Jethro provides us with his thoughts on the 991 GT3 RS and Cayman GT4. Both, he says, are something special.



Andrew Frankel
@Andrew_Frankel

One of the UK's most respected automotive journalists, Andrew writes for Motorsport, Autocar *and the national newspapers.*

This month: Andrew drives the new 911 Carrera, and looks at a car that started life as a Jaguar yet won Le Mans for Porsche.

COYS AUCTION

INTERCLASSICS & TOPMOBIEL '16

16 JANUARY 2016

THE NETHERLANDS

Coys Europe will be returning to Interclassics & Topmobiel in Maastricht on 16th January 2016. This now established auction at what is now considered one of Europe's most stylish and boutique historic motor shows of international quality is the ideal venue for the sale of your specialist or historic motor car at the beginning of 2016. The venue and its perfect location offer wide appeal across Europe and has seen other successful Coys auctions in the past, such as the record-breaking sale of the Stasys Brundza Collection.

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MACAN JOINS GTS RANGE

The Macan is already one of Porsche's best selling models. This GTS version is sure to prove an incredibly popular addition.







Porsche's popular Macan compact SUV has become the latest vehicle in its range to wear the coveted GTS badge. The new GTS sits between the S and Turbo models, using a tweaked version of the three-litre V6 bi-turbo engine from the Macan S linked to a seven-speed PDK transmission bringing peak power to 360hp with 369lb ft of torque. Using Porsche's Traction Management system (PTM) providing variable power distribution to all four wheels the Macan GTS can reach 62mph in 5.0 seconds (with the optional Sport Chrono package). That's just a couple of tenths of a second slower than the Turbo model. And, as a result of a sports exhaust system, we're told the new model sounds fantastic.

Typical of the GTS cars we've already seen from Porsche, the Macan version is said to combine enhanced driving dynamics with everyday usability and style, too. A focused chassis comprises a tuned PASM system, lowering the car by 15 millimetres, partnered with 20-inch RS Spyder design alloy wheels finished in matt black. The styling of the new GTS fits with the rest of the GTS range, its Sport Design styling package is complimented by black exterior accents, while GTS-specific colour-coding also features. This makes it one of the best looking Macan models yet seen. For the first time the Macan also features the option of LED headlights including Porsche Dynamic Light System Plus.

Falling in line with the new second-generation 991, the GTS features Porsche's new Communication Management (PCM) system, but that's not the end of the interior highlights. In keeping with the exterior styling are sport seats with Alcantara centre sections and 'GTS' interior motifs, with additional complimentary Alcantara trim appearing elsewhere in the cabin. There's also now the option of the Connect Plus module, which offers online navigation with real-time traffic information, together with smartphone integration via Apple CarPlay. Further standard features are a digital radio, front and rear ParkAssist, multi-function steering wheel with gearshift paddles, and an electronic tailgate release.

The Macan GTS is on sale in the UK and Ireland now priced from £55,188, that's around £9000 dearer than the S model, but judging by the standard of previous GTS models we'd wager it's a price worth paying. To find out we'll be bringing you a full road test of the new model in our next issue.

CAYMAN GT4 CLUBSPORT REVEALED

Following the recent announcement of the Cayman GT4 Clubsport, Porsche has unveiled the car during its world premiere at the Los Angeles Auto Show.







Porsche's new entry-level race car, the GT4 Clubsport, has been designed with club racing in mind, and is set to be homologated next year.

Powered by the same 385hp 3.8-litre flat-six motor as its road-going counterpart, this new mid-engine racer takes the GT4 concept to the next level. A specially modified six-speed Porsche double clutch transmission with shift paddles on the steering wheel features in the GT4 Clubsport, with a mechanical rear-axle locking differential designed for racing. The car's lightweight front struts are lifted from its big brother, the 911 GT3 Cup car. Steel 380mm brake discs provide the stopping power, together with six-piston callipers at the front, with four-piston equivalents at the rear. The anti-lock brake system can be adjusted in 12 stages and the Electronic Stability Programme has been expanded for use with slick tyres.

Delivered ex-works with a welded-in safety cage, the GT4 Clubsport weighs just 1300kg. Some of that featherweight is achieved through a light racing bucket seat and a stripped-out interior built strictly for purpose. A 90-litre fuel tank fitted as standard, with the option of a 70-litre item or 100-litre FT3 safety tank is also available. Forged 18-inch wheels shod with Michelin tyres perform a competition function and happen to look the part, too.

Priced at €111,000, which equates to around £78,000 before VAT, the Cayman GT4 Clubsport can be ordered now direct from Porsche Motorsport in Weissach. For 2016, homologation is planned for race series such as the VLN Long Distance Championship at the Nürburgring, the SRO GT4 series, the Pirelli GT3 Cup Trophy in the USA, the Ultra 94 GT3 Cup Challenge in Canada and for club races run by the Porsche Club of America, as well as for other club-level meetings around the world.







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PORSCHE CENTRE GUILDFORD RESTORES 968 CLUB SPORT

The 2016 Porsche GB Classic Restoration Project gets its hands on a treasured 968 Club Sport to mark the 40th anniversary of the first front-engined Porsche.

Porsche Centre Guildford is paying tribute to the late Derrick Brocklehurst, a local Porsche enthusiast who served to inspire after being diagnosed with cancer in 2004. Derrick was determined his illness would not stop him from achieving his dream of driving his cherished Porsche round the world-famous Spa-Francorchamps race circuit in Belgium and the legendary Nordschleife in Germany. After learning the cancer was terminal, Derrick refused treatment as it would cause him to lose feeling in his hands and feet, which would prevent him from making his final road trip dream come true.



Derek's journey in September 2004 hit disaster early on through clutch failure but Porsche Centre Guildford stepped in to get him back on the road. He hadn't told the team of his condition and that this would be his last adventure in his treasured 968. Derrick had the time of his life on his 1300-mile road trip and sadly passed away in 2005. Since the adventure the car has sat unused, making it the perfect candidate for the Porsche GB Classic Restoration Project, a nationwide restoration initiative involving Porsche Centres and their bodyshop partners.

Now Porsche Centre Guildford and Porsche body repair specialist Premier Panel Skills have vowed to undertake a full restoration of the car by way of a tribute to the local man. For 2016 the project will celebrate the 40th anniversary of the first front-engine Porsche. Following the car's last appearance at Shere Hill Climb in October, restoration has now begun.





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911 S 2.4 (5-Speed) LHD

Light Yellow • Black Corduroy Sports Seats • 15" Fuchs Wheels • Blaupunkt Radio • Porsche Certificate of Authenticity 1972 (K)

£249,995



911 Carrera RS (993) LHD

6-Speed • Grand Prix White • Black/ Grey Dual Tone Leather Bucket Seats 18" Split Rim Wheels • 3-Spoke Steering Wheel • 58,240 km • 1995 (N)

£244,995



911 Carrera RS (964) LHD

5-Speed • Maritime Blue Triple Tone Leather Bucket Seats • 17" Magnesium Cup Wheels • Rear Roll Cage • 93,656 km (58,195 m) • 1992 (J)

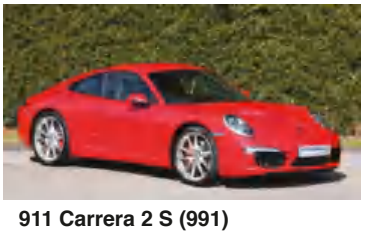
£224,995



911 GT2 (996, 6-Speed)

Polar Silver • Black Leather Sport Seats Porsche Ceramic Composite Brakes Large Carbon Interior Pack • 20,892 miles • 2003 (03)

£144,995



911 Carrera 2 S (991)

7-Speed PDK • Guards Red • Black Leather Sport Seats • Touchscreen Satellite Navigation • 20" Carrera 'S' III Wheels • 17,837 miles • 2012 (12)

£64,995



911 Carrera 4 S (997 GEN II)

7-Speed PDK • GT Silver • Black Leather Seats • Touchscreen Satellite Navigation • 19" Carrera Sport Wheels 22,643 miles 2010 (60)

£51,995



911 Carrera 2 S (997 GEN II)

7-Speed PDK • Atlas Grey • Black Leather Sport Seats • Touchscreen Satellite Navigation • 19" Sport Design Wheels • 19,819 miles • 2010 (10)

£49,995



Boxster S (981, 7-Speed PDK)

Basalt Black • Black Leather Seats Touchscreen Satellite Navigation • 20" Carrera Classic III Wheels • 14,757 miles 2013 (13)

£44,995



911 Carrera 2 (997 GEN II)

7-Speed PDK • Platinum Silver • Dark Blue Leather Seats • Touchscreen Satellite Navigation • 19" Sport Design Wheels • 39,000 miles • 2011 (61)

£44,995



Boxster Spyder (7-Speed PDK)

Carrara White • Black Half Leather Bucket Seats • Touchscreen Satellite Navigation • Switchable Sports Exhaust 42,467 miles • 2010 (10)

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PORSCHE SECURES WEC CHAMPIONSHIPS

Porsche clinched the World Endurance Championship in China, its first since 1986, while Webber, Hartley and Bernhard secured the World Endurance Championship drivers' title in a nail biting season finale in Bahrain.

FIA WORLD ENDURANCE CHAMPIONSHIP
6 HOURS OF SHANGHAI AND 6 HOURS OF BAHRAIN











SHANGHAI

Porsche's fifth victory in a row in the penultimate round of the World Endurance Championship in Shanghai secured the manufacturers' title in style.

After a start behind the safety car due to wet conditions, car 17 of Brendon Hartley, Timo Bernhard and Mark Webber maintained the lead and only temporarily lost it to the number 8 Audi on lap 57 during the pit stop phase. On lap 61 the sister Porsche of Romain Dumas, Neel Jani and Marc Lieb passed Bernhard as well, and as the Audis pitted, Bernhard lay in second behind Jani. On lap 101 the two Porsche 919 Hybrids swapped positions, the team citing that the number 17 machine was faster, but Porsche clearly had one eye on the championship points situation, too. Bernhard handed the car to Webber on lap 115, now on semi-slick intermediate tyres which Webber swapped for slicks on lap 132. On 154 Webber took his last refuelling stop and retook the lead when the sister car pitted to refuel – and number 17's way to victory was clear.

Bernhard, Hartley and Webber's car crossed the line to take victory, ahead of Dumas, Jani and Lieb for Porsche's fourth one-two finish of the season, and to claim the manufacturers' title for Porsche. Porsche clinched the title with 308 points ahead of Audi on 238, and Toyota on 137. For Porsche it is the 13th manufacturers' world championship title in endurance racing, the first since 1986 in the then Sports Car World Championship. The drivers' title would be decided at the season's finale in Bahrain, where Bernhard, Hartley and Webber were just 12 points ahead of the Audi drivers.

BAHRAIN

The number 17 Porsche 919 Hybrid of Mark Webber, Brendon Hartley and Timo Bernhard finished fifth overall at the 6 Hours of Bahrain despite reliability issues that saw them pitting for repairs just half an hour into the race.

Fifth place alone would not have been enough for the number 17 squad to snatch the crown from the best placed Audi trio of Lotterer, Tréluyer and Fässler, so it was down to the sister Porsche 919 Hybrid of Romain Dumas, Neel Jani and Marc Lieb to pass the Audi crew on the road, taking the lead and therefore the required championship points away from them.

The victory for the number 18 919 Hybrid marked the long awaited first race win this season for Dumas, Jani and Lieb. Neel Jani said: "For us three this race win was overdue. We have been in P1 so often, but didn't get the victory laurels for various reasons. It was a great relief to finally get it today."

In 16 races Webber, Hartley and Bernhard achieved six pole positions and four race wins together, the trio have now won the first drivers' world championship title in each of their careers. Mark Webber said: "It's the first world championship for me – this feels beautiful. That's not an easy thing to achieve, so to have won this title is very special. But to win it wearing a Porsche suit is even more special to me."

Just five points separated Bernhard, Hartley and Webber from Lotterer, Tréluyer and Fässler in the final standings. It is 29 years since Derek Bell last won the championship for Porsche, and it comes in a year that has seen the team also claim the WEC manufacturers' title – quite an achievement for Porsche in only its second year of competition in the series.



911 RSRs WIN IN CHINA, AND CLAIM ANOTHER TITLE FOR PORSCHE IN BAHRAIN

A third win of the season for the Porsche 911 RSR of Richard Lietz and Michael Christensen at the Six-Hour race in China meant the title would be decided at the finale in Bahrain. The sister car, campaigned by the Porsche Manthey squad with French pilots Frédéric Makowiecki and Patrick Pilet, finished in third place.

Makowiecki in the number 92 car and Lietz in the 91 vehicle got away cleanly at the start and established themselves amongst the front pack of the competitive GT-Pro field. The Frenchman, who had taken off from the fourth grid spot after a difficult qualifying, moved into second after just five laps. The Austrian, who had started from directly behind him and travelled to China as the leader of the Cup for GT Drivers, managed to settle into third place. After another ten laps, he manoeuvred himself into first place and, with a solid performance, laid the foundation for his third win of the season. Makowiecki left the track briefly during a duel and fell back to sixth place. But after the second hour of racing the number 92 car, now with Pilet at the wheel, had again moved up into second place behind the leader, Michael Christensen. As the track gradually dried with two hours to go, the strategists made the call to change from wet tyres to slicks at exactly the right moment.

The overall result meant Porsche's defence of its manufacturers' title in the GTE-Pro class remained intact, while Lietz extended his lead in the Cup for GT drivers, as did the Porsche Manthey team in the team classification. It was all to play for in Bahrain.

In Bahrain, Makowiecki and Pilet's 911 RSR scored its fourth GTE-Pro class win of the season, netting Porsche a further WEC championship in the shape of the GTE-Pro Cup for GT Manufacturers, beating Ferrari and Aston Martin. The Porsche Manthey squad secured the trophy for GTE-Pro teams, and Porsche works driver Richard Lietz convincingly defended his title in the Cup for Drivers.

Makowiecki said: "We had to wait for our first win of the season until the very last race. But it was worth it. Before the start, I said to Patrick that on no account did I want to go home without a victory. The year was not easy for us. We took a while to get where we wanted to be but we fought at all times and therefore deserve this success."

AUTOFARM AT DAYTONA

Josh Sadler completed an American tour in his 911ST at Daytona...



DAYTONA CLASSIC 24 HOURS

Autofarm's Josh Sadler enjoyed a successful conclusion to his American adventure this autumn, which had seen him fly his 1970 911ST to the United States back in September.

After first competing at Rennsport Reunion at Laguna Seca in California, 73-year-old Josh left the car behind and retuned home to the UK. However he and fellow Autofarm employee Mark Henderson returned to the States, travelling to the iconic Daytona International Speedway in Florida to compete in the Classic 24 Hours meeting Josh's former factory prototype 911 there. Competing in a series of races over the 24 Hours, the Autofarm-prepared Porsche finished seventh overall and third in class. We thought Josh's 911 simply looked stunning on Daytona's famous banking.

CARRERA CUP GB SCHOLAR ANNOUNCED

Charlie Eastwood has been named as the 2016-17 Porsche Carrera Cup GB Scholar.

20-year-old Ulsterman Charlie Eastwood overcame tough competition from three other highly talented drivers to become the Carrera Cup GB Scholar for 2016-17. Eastwood participated in a challenging assessment day at Silverstone at the end of October going up against Sam Brabham, Ashley Crossey, and Hannah Pym. The four undertook a series of on and off track assessments including a drive in the Porsche 911 GT3 Cup Car, high-intensity fitness evaluation tests and media workshops in order to clinch one of the biggest prizes in UK motorsport.

Eastwood follows in the footsteps of current scholar Josh Webster, who broke multiple records on his way to becoming the youngest ever winner of the championship and the first Porsche Scholar to win the title in their inaugural season. On top of £80,000 per year towards his 2016 and 2017 Porsche Carrera Cup GB budgets, bespoke training plans with Porsche Human Performance and world-class media training, he will also gain priceless exposure to the international Porsche motorsport family.

Eastwood said: "First, it's going to be a big change for me as I'll be going from single-seaters to sports cars which is a new avenue in my racing career. It really is a once-in-a-lifetime opportunity that could make such a huge difference to me in the future. There are not many drivers who can claim to have the most successful sports car racing marque behind them." The 2016 Carrera Cup GB season gets underway in April.







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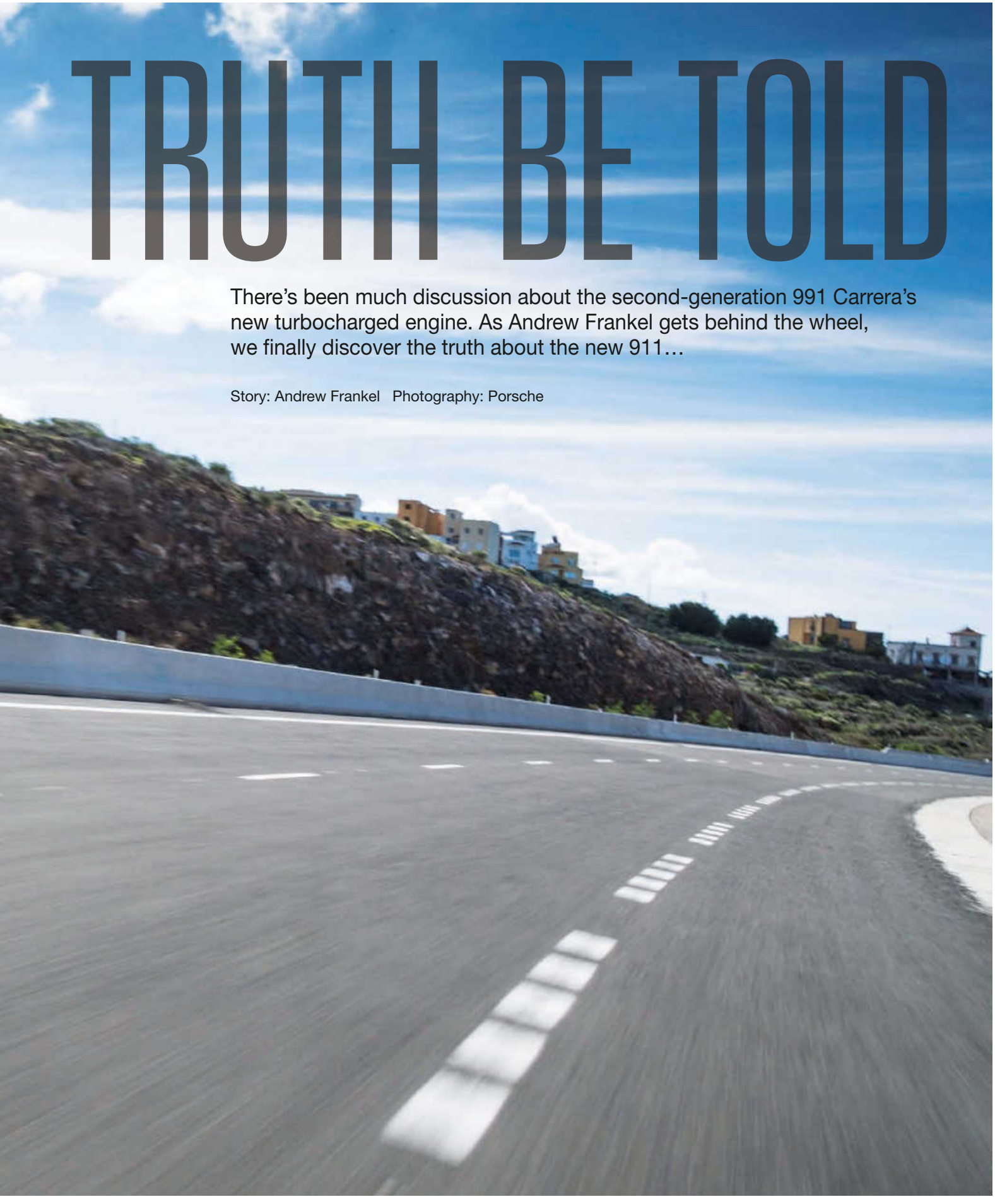



S GO 4032

TRUTH BE TOLD

There's been much discussion about the second-generation 991 Carrera's new turbocharged engine. As Andrew Frankel gets behind the wheel, we finally discover the truth about the new 911…

Story: Andrew Frankel Photography: Porsche



Porsche midlife refreshes are usually interesting, and for two main reasons. The first is simply that there will be new facts to learn and a new driving experience to enjoy. Second, they are also interesting because they reveal a lot about how Porsche itself now perceives the car it is replacing. And because Porsche is usually pretty much on the money with its brand-new products, its face-lifts have usually been modest, at least by the standards of an engineering-led company that would never just do the cosmetics and hope its customers are stupid enough to be fooled into thinking it's a new car.

But this second-generation of the 991 series of 911 is no minor upgrade, it is a comprehensive makeover, leaving few areas of the car untouched. I knew it was a serious upgrade after having had a ride in the thing a couple of months back (see November 2015's issue). Now that I have driven the car hard and fast myself on deserted roads for most of the day, I know just how radically this car has been changed. And while these are changes that many will like, so too will there be those who'll wish Porsche had left it alone.

This, then, is the most radically altered 911 not to get a new model number of its own. There have been completely new models that, in terms of the way they have felt, seemed less changed than this: SC to Carrera, 964 to 993, 996 to 997 to name but three.

Regulars will know the details and anyone with any interest in Porsche's most enduring car will be aware that from now on (and GT3s apart), all 911s will be turbocharged. But before we get into the meat of the driving experience, a small recap is perhaps in order.

The engines in the old Carrera and Carrera S have been replaced by a three-litre motor with only external modifications to the turbos, electronics and exhausts to create the difference between a 364hp Carrera and a 414hp Carrera S. In both cases power rises by 20hp over the outgoing 911, but torque has risen too, by 44lb ft. But it's the fact that this torque is developed at 1700rpm rather than the 5600rpm required by the old motor that gives the biggest clue to this car's change of character. The engine is more fuel efficient and therefore produces less CO_2, or so the absurd tests the EU makes manufacturers conduct say. What matters is that even if it's only for tax purposes, the new 911 will be cheaper to run than the old.

The engine puts its power through a seven-speed gearbox, available with either two or three pedals and in either case with longer ratios and quicker, smoother shifts. The chassis is lower, the rear tyres are fatter, Porsche Active Suspension Management (electronically-controlled dampers) is now standard while the Carrera S can for the first time be fitted with four-wheel steering if owners are prepared to fork out an additional £1530.

The cosmetic modifications are minor but highly effective. I always did think the most overlooked benefit of the 991's elongated wheelbase was the effect it had on the car's stance and with new bumpers and engine intakes, Porsche has capitalised on this raw material. Honestly I think it's been over 40 years since the entry level 911 looked as good as this.

But we're not here to look at it. So I slot myself behind the wheel of a Carrera, realise I've neither the time nor the inclination to learn my way around the all new infotainment system and fire up the engine.

I'm greeted by a civilised whirr, assuredly and unmistakeably that of a flat-six motor, but lacking somewhat the theatre and sense of



occasion you might hope and even expect the world's most revered sports car to offer. Then again, if you've got to get up early to catch the red eye, your neighbours will probably not even notice you've gone.

The car is a manual and I marvel almost as much at how improved the shift quality is. I smile inwardly when I recall Porsche engineers rejecting out of hand my suggestion when I first drove a 991 in 2011 that the change could do with some work. At the time I decided that, for the first time, I'd rather change using paddles. Consider that decision revoked.

The new 991 rides beautifully too – eerily so on smoother surfaces. Porsche eliminated the traditional 911 nose bob back in the 997 days but I still expect the car to wriggle around on rough roads but you'll need to drive off-road altogether before you'll find fault with the comfort levels. It's quiet too. This car has sports exhausts but they make so little noise I'd really not bother spending the £1773 they cost unless you like the look of the two traditional pea-shooter pipes out the back.

More than anything, though, this car is easy. I've always known why Porsche gave its sports cars such long gearing and it has nothing to do with enhancing the driving experience and everything to do with keeping the claimed fuel consumption as low as possible. But in a car without much mid-range torque it was a pain, especially if fitted to a manual gearbox. No longer. With all that torque available the 911 just surges forward, pretty much wherever in the rev range you find yourself. No need to change down a couple of gears and no need to lament you didn't pay a few extra quid a month for the S – at least not in a straight line. The numbers say it's only a couple of tenths quicker to 62mph, but out there in the real world the time saved not having to decide how many gears to drop and then dropping them means in reality the car is faster by far.

But woe betide he or she who mistakes fast for fun for these are uneasy bed-fellows, prone to falling out over the strangest issues. Like turbochargers… When I read elsewhere that these turbochargers actually provide a better driving experience I find myself wondering which cars the authors of these stories must have driven, certainly none whose alleged characteristics I recognise at all. That the driving experience has changed, and quite dramatically so, is beyond dispute but I'd argue myself hoarse against those who say it's improved.

What you gain is that extra pace and, far more importantly, that extra mid-range shove. But you lose out at the top. Anyone whose driven a modern 911 hard will know the feeling as the needle passes 4000rpm that not only are you little more than halfway around the dial but that what's been is nothing compared to what's to come. It's growling at 5000rpm, howling at 6000rpm, screaming at 7000rpm and shrieking as the rev limiter cuts in, not far shy of 8000rpm; and who'd choose for it to be any other way? The new engine not only doesn't do this, it can't do this. Yes, the redline is set impressively high at 7500rpm but peak power is at just 6500rpm. What's more, there's no crescendo here, the engine just gets louder as the car gets faster. It's a good noise, no mistake, and impressively so for a turbo, but the old addiction to the upper reaches of its rev-range has gone and no-one is doing anyone a favour by suggesting otherwise.

The chassis, however, is improved whichever way you look at it. Not only is there the aforementioned near transformation in ride quality, it seems also to have a more natural feel to its steering which, if you recall, was one of the











big concerns of the electrically assisted first generation 991 helm.

More than anything, though, you notice the car's grip. Midway through a quick curve at the car's launch in Tenerife a tourist bus appeared coming in the other direction but largely on my side of the road. What was needed was instant, drastic deceleration and there was no time to consider the likely effect on the car's composure. In fact there was no effect at all, the 911 just shed the speed with no more drama than if we'd been travelling in a straight line. To experience that and then to think that even today some people are nervous of 911s because of the way they handle is to witness one of the greatest disconnects in the automotive world today.

What I would say is that if you want to make the most of the chassis' new-found abilities, you really need to do as most UK buyers will and order up a Carrera S. At £85,253 it is a substantial £9445 more expensive than the Carrera (not to mention £2312 more than then old Carrera S) but it really is worth it. For while, as previously stated, the standard engine now offers truly excellent performance, what it lacks is the ability to really tax the chassis in which it's installed. The S, with all its additional power and torque has no such problems.

Indeed just when experience of the Carrera was perhaps leading you to the conclusion that Porsche had gone one step too far in its quest to sanitise and civilise the 911, the S stands up and refutes the suggestion entirely. It's still a very different driving experience to any non-turbo 911, mainly because so few gear changes are required and you spend all your time at low to medium engine speeds. However, that is not to say it is not rewarding.

What it likes is to be left in third gear, a ratio that all by itself would be appropriate for 90 percent of all the decent driving roads in the world. So leave it in that gear, put your hands back on the wheel and savour the new-found accuracy of the steering, the poise of the suspension and the ability of the engine to dose the rear tyres with enough torque to test their traction to the absolute limit. Then you'll be aware of a car operating at a level nothing you might today call a rival can even approach, an ability gulf between it and everything else as wide today as it's ever been in the past. In this environment and among its class, it is simply the best.

There are those who will mourn what's been sacrificed to get the new 911 to this point, and I'd be one of them. As a die-hard old traditionalist, the noise and throttle response of a 911 means more to me than even the power it puts at your disposal. However, to those who don't merely drive these cars but own and live with them this is clearly the most accomplished 911 yet. And to them, Porsche's customers, that is what will matter most ○















This is the most radically altered 911 not to get a new model number of its own


PORSCHE
GT4
RX15 PZF



CALL OF DUTY

In 2015 the Cayman was called upon to perform a duty typically reserved for 911s, the result was the GT4. Could Porsche's mid-engined coupé justify its GT badge?

Story: Simon Jackson Photography: Gus Gregory

Fifty. That's the number of Cayman GT4s Porsche reportedly allocated to the UK from the few hundred cars initially built. It goes some way to explaining why this sought after vehicle is now trading on the 'nearly new' used car market for around £35,000 over its list price of £64,451. But perhaps it also tells another, more important story, one of Porsche anxiety, humbleness and excellence in equal measure.

Porsche claims to have been 'surprised' by the success of the GT4, the first Cayman to run through the Weissach process and bear its fabled 'GT' badge and the first red-hot version of the model to emerge in its ten-year history – but was it? I'd wager there probably were a few nervous people wearing suits at Zuffenhausen, modest folk, perhaps, who were insecure about the creation of a Cayman wearing Porsche's iconic Motorsports department badge and that they were indeed pleasantly surprised by the frenzied reaction the GT4 received. But flabbergasted by it? Astonished, even? It's hard to imagine given the fact that anything Andreas Preuninger, director of Porsche's GT model line, touches these days, turns to gold. It seems to us it's more likely there was an underlying concern amongst some Porsche employees that this new concept might generate some unwelcome heat in the showroom for its baby, the 911. And that's a viewpoint we can understand. The Cayman is a fantastic car in any specification; affording it 911

Could Weissach really produce a successful baby GT3 without getting too carried away?

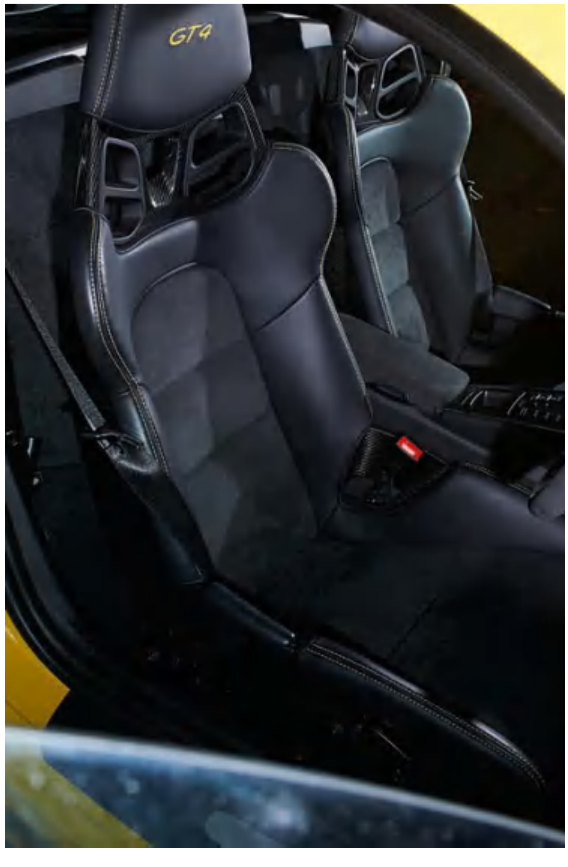
Carrera S power, a focused, polished chassis and cherry-picked parts from its bigger brothers further up the GT production line, was a formula that was only ever going to improve it. And so it has. Therefore, is 'surprised' the right expression? Perhaps not, a deliberately calculated and considered approach is more probable, and far more Germanic. But the whys and wherefores are largely academic here when Porsche has delivered to us, as it has, one of its most exciting GT cars in a generation.

Since the Cayman's inception in 2005 Porsche enthusiasts have been crying out for a quicker version, and some of those voices were silenced with the advent of the GTS in 2014. The Cayman GTS is a fabulous car, refined enough to be useable everyday yet fun enough to feel like a true Porsche sports car in the traditional sense of the concept. Would its new bigger brother, the GT4, take things too far? Would we end up with an overpowered GTS on steroids? Or could Weissach really produce a successful baby GT3 without getting too carried away? Of course it could. Even before you step inside the GT4 it communicates positive visual cues. The front bumper replicates the GT3's front aspect with mesh inserts, air dams and pronounced muscular splitters. The rear wing shouts rather than screams like a 911 GT3 might, but it's purposeful and seemingly gels beautifully with the car's new stance. Naturally it has an aerodynamic role to play, too. Vast brakes (PCCB carbon ceramics in the case of our test car) hide behind new 20-inch diameter rims (wrapped in dynamic Michelin Cup 2s), and then you catch a glimpse of the interior. Carbon-clad GT3 RS seats show a flash of weave here, an Alcantara patch there, and all this before you consider what's hidden from view, the most important part: the engine. With the 3.8-litre naturally aspirated engine shoehorned into the 981 chassis there can't have been much more room for manoeuvre. But word that the reason you can't specify a GT4 with a PDK automatic gearbox is because the engineers at Weissach couldn't fit one in it has been disproved by the GT4 Clubsport. There's nothing to worry about there, though, as the six-speed manual gearbox carried over from the GTS model is delicious – more on that later. Slide inside the cabin, position yourself into the (optional) bucket seats (now electronically adjustable for height), and everything seems just right with the world. There are no huge surprises for those familiar with the interior architecture of the 981 Cayman yet, as Weissach is so adept at doing, each and every touch point seems to have reconsidered. It all delivers the kind of rich textural experience familiar from the GT3, although this car is considerably cheaper. Nevertheless, there has been no obvious corner cutting going on. A glance behind reveals a stealthy roll-cage but it's not overpowering; I certainly don't feel like I'm surrounded by scaffolding on a building site even though in the Cayman's smaller cabin it would've been so easy for that to have been the case. Like the exterior styling, the interior represents that of a scaled down GT3. Proportionally speaking, in fact, it's all rather reminiscent of a comfort-spec GT3. In short, it's bang on the money. This car transmits a sense of excitement at every opportunity, and we haven't even started it yet!

Twisting the ignition key represents the departure point by which any previous iteration of Cayman is immediately separated from this GT4. From the familiar yet somehow amplified 911 Carrera S bark on start-up onwards everything else is different to any Cayman before it. And brilliantly so. The gate on the gearbox is tight knit, positive and gratifying and from the moment you set off you're rewarded with torque upon torque from a 3.8-litre six that is supposedly detuned to 385hp with 310lb ft torque (you're sharper than I if you can spot where it's lacking) all the way through the rather tall gear ratios, ratios retained from the GTS model. The only criticism we can level at this car is that the gears seem a bit too long for it; third seemingly does everything from (almost) pulling away to reaching in excess of double-digit speeds. The knock-on effect is that at motorway cruising pace, the engine is revving to near 4000rpm (it'll achieve 80mph in second gear) and thus is a contributing factor to it recording around just 30mpg. We know from the 911 Carrera models that this powertrain is capable of achieving 35mpg (if not more) under the same conditions. But this is a criticism that's unimportant in light of the bigger picture here. And that bigger picture is one of colossal enjoyment from a car so well engineered, so engaging that it represents the very reason contemporary Porsche cars are so compelling.

Underneath the GT4 has received a series of impressive changes over its Cayman brethren. Up front you'll find GT3 suspension that's been modified to suit the 981 platform. Forged







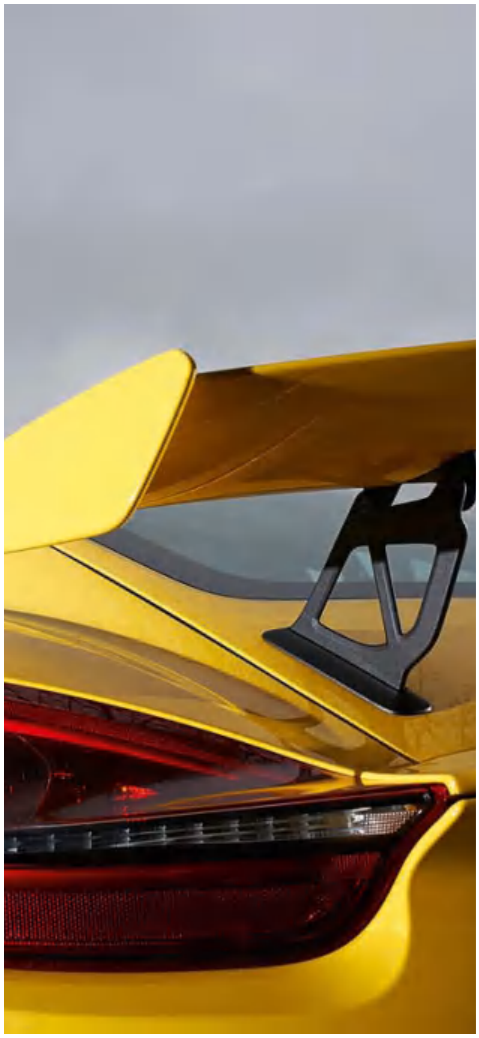


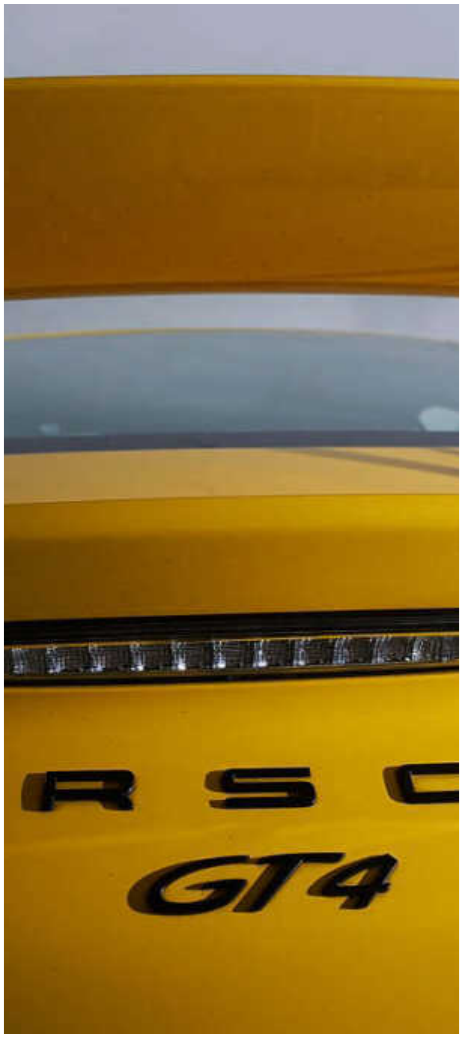


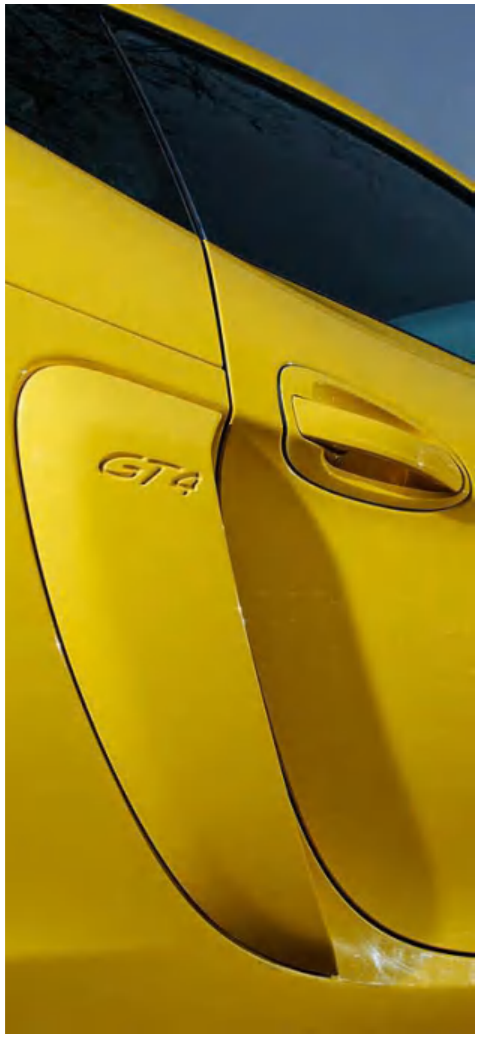
The GT4 transmits the feel of its bigger brother, the GT3, everywhere possible. That vibe is amplified by one of the most exciting driving experiences money can buy…

It has a level of performance that means you can use most of its power all of the time









aluminium split wishbones allow the car's camber to be altered (the same goes for the rear), and there's a three-way adjustable front roll bar to enable the driver to tailor the driving experience to suit their preferences. Ball bearings have been incorporated into the top mounts, and between the uprights and lower wishbones, too. Out back the rear suspension is new, bespoke to the GT4, yet running with exactly the same ethos as the GT3 setup at the sharp end: read new uprights with pivot points, a reinforced crossmember, newly developed dampers with lightweight springs and a stabiliser with three-way adjustment. The mechanically controlled differential with asymmetrical locking action works at 22% in traction, 27% in overrun. In practice, like the GTS model directly below it in the Cayman model line-up, the GT4 allows a pleasing amount of slip angle before its traction management and stability programmes cut-in. This means that even with all the driver aids switched on this car remains huge fun, twitching and sliding from the rear if so provoked yet also providing unreal front end grip, communicative steering and blistering acceleration which sees it pulling all the way through the rev range. It even has a second wind after 5000rpm that manages to draw a smile across your face every time you reach it (and it won't die out until the redline north of 7000rpm) partly due to its astonishing proficiency, partly due to the accompanying soundtrack. Tipping the scales at 1340kg this is not a heavy car and as such it offers a beautifully balanced chassis which exploits the best traits of a mid-engined Porsche, daring you to reach out for its sweet spot and to rotate it on the throttle. Indeed, turn all the driver aids off and you're treated to one of the greatest handling, most satisfying and appealing cars Preuninger and his boys at the GT department have ever touched. We could genuinely furnish this page with superlatives all day…

This is not the most powerful Porsche GT car and arguably it's not the most accomplished either. But where the GT4 wins over some of its illustrious GT-badged predecessors is in its accessibility, and we're not talking about its cost (yet). Don't misunderstand us, this is a seriously quick car but it has a level of performance that means you can use most of its power all of the time; you can drive this car nearer to its maximum on the road than you could a GT3, for example. And even a pilot new to track driving could, with practice, get within 95 percent of its performance envelope. We're not sure we could say that of a GT3 with confidence. And we like that character trait. Better still there's enough adjustment in this car's fabric so that if you are an accomplished track driver you can tweak the GT4's setup further and play around with its features. For example, you can remove the front diffuser's air channels when adjusting the angle of the rear wing to balance out its handling. And don't forget the adjustment in the suspension setup either. Porsche could have gone further still with this car; of course, it may have been anxious, humble even, but it need not have been. And let's not forget it'd have been conscience of usurping the GT3. Besides, it needs to leave headroom for a GT4 RS, right?

And, of course, then there's the price. At £64,451, that's just £9000 more than a GTS, well over £10,000 cheaper than an entry-level 911 Carrera, and around £35,000 less than a GT3. Whether Porsche priced this car too cheaply or surprised itself with its success is now largely academic; as it stands in 2015 we've been gifted one of the performance bargains of the modern era and a car truly worthy of Porsche's iconic GT prefix ○


RF15 XLG

VIRTUAL INSANITY

Porsche's Motorsport department has created one of the wildest performance road cars to ever emerge from Weissach: the 991 GT3 RS. Leave your brains at the door for this one…

Story: Simon Jackson Photography: Gus Gregory

Attack any corner, at practically any speed in the latest GT3 RS and it will kindly ask you to redouble your efforts for next time. 'Try that again, only with twice as much pace' it guffaws in your face. So you do. You enter the corner once again, this time twice as fast as the last run, and still it wants more. It copes with whatever you might throw its way; this car has immeasurable, supernatural levels of power, grip and balance with beautifully detailed feedback. So much grip does it have that you invariably end up winding lock off halfway through a corner, playing dare with the throttle pedal and losing every time. It punches up through the PDK gearbox with sheer ferocity as you chase a repetitively addictive redline, but it's always goading you. It wants you to push harder, faster, stronger, above and beyond anything you may feel comfortable with, anything that feels sane. It offers utterly deadly acceleration in every gear, eye-popping stopping power, and the accompanying tune from the four-litre flat-six sounds like the end of the world whenever you so much as breathe on the 'go' pedal. You daren't look down at the digital speedometer, not now, not ever (even if you're on a track) for fear of blowing your own mind and having your perception of reality altered. This is a car for those with the capability to either remove or entirely reconfigure their brains to a completely new way of thinking while driving in a road car, a car with absolutely crazy capabilities. This is a phenomenal modern sports car for the modern world, a Playstation computer game brought to life and potentially a machine that's too wild for the road – a statement we'll qualify later. In short this is a contemporary Porsche Rennsport car through-and-through.

Trace Porsche's modern GT lineage back in history and you'll find, in any period, an iteration of 911 wearing 'that' badge worthy of anyone's dream garage. A car of its moment, utilising the latest technology and understanding of automotive possibilities to excel in each and every way. It's one of the reasons any Porsche with a 'GT' prefix has (and always does) become a highly sought after commodity, and ultimately far more than the sum of its parts. In more recent times the boys at Weissach seem to have reached new heights, though, and under the guidance of one Andreas Preuninger they're seemingly unable to produce a bad car – that is if you subscribe to the notion that any modern day Porsche of any variant could ever be labelled in such a way. You could argue that the 991 GT3 is enough car for most people, a road-going racing car with a glovebox, but as is the Porsche agenda these days, any GT3 must spawn an RS equivalent and that car always advances the concept of its sibling to extremes. And so when the 991 GT3 emerged in 2013, the Rennsport version naturally followed, unveiled at the Geneva Motor Show in March 2015.

Porsche claimed it to be the most capable and focused GT-series car to date, and on first inspection the details were good (as if we were expecting anything less): 500hp and 339lb ft torque from a 3996cc engine, the first series production RS to use a larger engine than its GT3 counterpart, achieved by increasing the stroke of the 3.8-litre mill and thus growing its overall capacity. The (PDK-only) gearbox was however borrowed from the GT3, boasting a revised final drive on account of the larger (12.5x) 21-inch rear wheels and matching Michelin tyres. The

This is a driver's car in the most extreme fashion, and as such it will reward the real drivers out there

chassis was bolstered with a wider track all-round, redesigned roll bars, and stiffer rear springs. It was lighter than the GT3, too, but not by much (10kg) thanks, in part, to a magnesium sheet metal roof and carbon fibre front wings, bringing it to 1420kg in total making it a full 60kg heavier than the 997 RS 4.0-litre. Nonetheless the 0-62mph time of 3.3 seconds was enough to silence any argument that the 991's weight penalty may have created. That and the unforgettable amount of downforce the thing can generate. At 345kg it's over twice that of the GT3, while at 100mph it was more than its 997 forerunner achieved at top speed and 80 percent of the downforce of its Carrera Cup race car equivalent. Preuninger said of the GT3 RS: "We want this car to be in pole position. We want to be the best on the track – that's what RS has always stood for." But was he forgetting something? The GT3 RS has to lead a double life as a road car, too…

Of course, Preuninger and the boys at the Rennsport department hadn't forgotten that fact at all. And as soon as you jump inside the 991 GT3 RS you're greeted by the familiar sights and smells of a modern 911 cabin, save for the roll-cage behind you, the 918 bucket seats you're sat on, and a few trim differences. Don't, however, let this lull you into a false sense of security. So far as its inners go at least, this car is the archetypal wolf in sheep's clothing and every bit (if not more) of an animal than the wildest GT cars yet created: those of the GT2 ilk. How so? Because of its utterly brutish drive, of course. The 991 GT3 is a highly accomplished car, and quite simply all the sports automobile a man (or woman) might want, but in turning the mixture up to '11' as Porsche has done here for this all-conquering RS version, it has created a car so utterly capable of annihilating anything in its path that it's almost too uncompromised. It's almost too good… And believe us, we know how that sounds, and we know Porsche's engineers might spit their espressos over their desks and expensive CAD machinery to hear it, but it's a vicious circle Porsche now finds itself occupying. In the pursuit of perfection the GT3 RS has evolved into the purist's four-wheeled idyll, this car could well be perfect in the job role it was asked to fulfil but the trade-off here is some will find it almost too lairy for the road, too much of the car we all asked Weissach to build. They say you can't have your cake and eat it, but the 991 GT3 RS has allowed us Porsche enthusiasts to polish-off all three tiers and now we have tummy ache. The bottom line is that this car is fantastic, the epitome of Porsche excellence, but on the road you're never ever going to reach anywhere near its full potential or capabilities, and if you do you'll likely end up having the most almighty of car accidents.

When regular contributor Andrew Frankel took the 991 GT3 RS around the Bilster-Berg circuit in Germany earlier in the year, though, he discovered the reasons for any would-be trade off in road-going serenity. On track the GT3 RS is devastatingly efficient. But even then, even on track, the GT3 RS requires supreme confidence, a certain level of skill, and a driver content to work with a loose car underneath him to extract its full



You can't see much of the 4.0-litre engine in the back of the GT3 RS, but its aero additons do all the talking required…













The cabin is a relatively familar place to be but everything else about this car is very different…

potential. This is a driver's car in the most extreme fashion and as such it will reward the real drivers out there. That might explain why Porsche's works LMP1 drivers Mark Webber and Brendon Hartley have just taken delivery of theirs. We just wonder how many 'normal' owners will be confident enough to push that hard, as even with all the electronic trickery still switched on, the GTS RS requires a careful steer, as Frankel reported in our July issue: "You have to be happy with the car feeling quite loose in your hands and accept the fact it will feel that way even if you leave all the electronic safety nets engaged. And then it really flies."

Then, and only then, says Frankel, will the GT3 RS deliver its biggest thrills, oversteering into corners on a trailing throttle, its four-wheel steer system and e-differential working overtime. And then at speed the relationship between



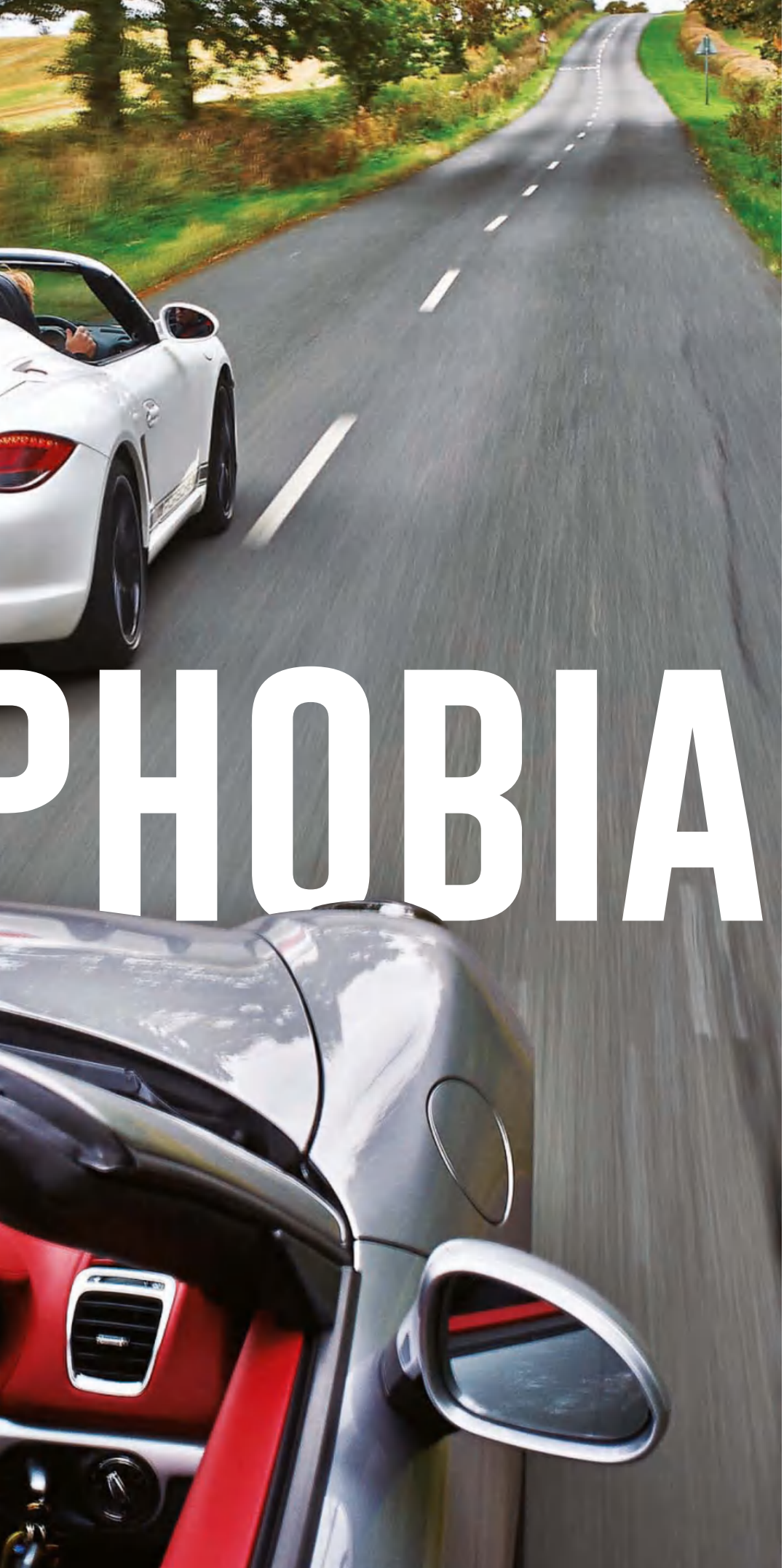
mechanical grip and aerodynamics very much comes into play, influencing apex speed by piling downforce onto the car, allowing the driver to play with understeer and oversteer, rotating the car on the throttle and enjoying a balance up there with the very best modern sports cars available, all the while operating at terrifying speeds. As we discussed earlier with road driving this car, Andrew (who is quite the peddler himself) admits you need a certain level of talent to get the best out of this car, and to avoid what would be a rather messy £131,296 accident. And Andrew's point of view is shared by many in the industry. It makes you wonder if this car should have worn a 'GT2' badge instead.

Porsche's latest enthusiast-based cars, be they GT, GTS or even lesser models, have nailed the blend of having the right level of driving fun mixed with fantastic performance and a overarching progressive nature. The GT4 and any of the GTS cars allow just the perfect amount of slip angle before collecting your thoughts for you and ensuring you live to fight another day. And there's the option for the more accomplished driver to turn these safety net systems off and exploit the car, and their own skill, further still when circumstances allow. The 991 GT3 RS is not to be confused with these cars. Yes, this car will allow the same levels of fun (more even) and its otherworldly performance will ignite passion in even the most po-faced of driver, but it is a serious track-orientated machine. It is not a car for the faint of heart and owning one over a GT3 is a question of both your own levels of proficiency behind the wheel, and ultimately whether or not you'll be able to get the car to the track on a regular basis, because there's no escaping that is where this car is most comfortable.

Don't mistake our tone here as negativity, though, far from it. The 991 GT3 RS is an absolutely immense car, representative of the level Porsche's engineers have now reached when deciding to build the ultimate road-going track car, and this thing is up there with the best of those creations and in no way should Porsche tame any future versions of this animal. Should a GT3 RS command skill and respect from its driver? Should it summon an air of apprehension at the same time, too? Damn right it should. This is a Rennsport car; the personification of Porsche's road and track talents, and an exceptional halo 911 truly deserving of those four letters and one number that have become synonymous with wild, accomplished and challenging performance cars. GT3 RS: one of the greatest Porsche cars of 2015, and possibly ever ○



ARACHNOR



PHOBIA

With the excitement of the Cayman GT4 some may overlook its sibling, the 981 Boxster Spyder, but that would be a mistake. Just how does this new iteration compare with its predecessor?

Story: Simon Jackson
Photography: Gus Gregory

As the first Porsche intentionally designed as a roadster since the iconic 550 Spyder of the 1950s, it seemed only right that the Boxster wore a 'Spyder' nameplate at some point during its lifetime. But we had to wait eight long years after the model's initial arrival, in 1996, before the moniker was initially dusted off and applied to Porsche's mid-engined two-seater. And, even then, it was only used on a limited edition version right at the last knockings of the 986 platform's run.

The 550 Spyder 50th Anniversary Edition model was both a bit of a mouthful and really just a run-out Boxster with extra bells and whistles applied, it numbered just 1953 examples. Perhaps more worthy of the name was the RS60 Spyder of 2007, though it too was a limited run Boxster, this time based on the 987 platform and numbering just 1960 cars.

This 299hp version commemorated Porsche's win in the 1960 12 Hours of Sebring, and like the 50th Anniversary Edition before it, featured a unique exterior hue, styling cues and wheel options to differentiate it from its siblings. But at the LA Motor Show in 2009, 12 months after the unveiling of the face-lifted second generation 987 model, the covers came off an altogether more exciting speedster-style Boxster, one that advanced the formula of Porsche's entry-level roadster further than ever before.

The 987 Boxster Spyder finally explored the idea of a true 'no frills' Boxster designed with the enthusiast at the forefront of Porsche's mind – this was indeed a car truly worthy of those five letters borrowed from the 550 of yesteryear. And thanks largely to a pair of swooping humps on its deck lid, it just so happened to look special, too.







The new Boxster Spyder shows off its lightweight credentials at every opportunity, providing several nods to its predecessor, and the Cayman GT4 with which it shares much…

Thankfully the parallels drawn between the Boxster Spyder of 2009 and the 550 were more than just a neat marketing ploy. The first three prototype 550 Spyders of 1953 featured removable hard-tops, and some 56 years later Porsche clearly took inspiration from that concept. As part of a weight saving diet plan for the Boxster, designed to create the lightest Porsche available at the time, the existing roof arrangement was superseded with a lighter canvas version, a svelte manually operated mechanism could be found in place of the Boxster's traditional electric affair.

Looking down every avenue for weight saving options, Porsche's engineers deleted the car's stereo head unit, door handles (RS-style red fabric door pulls were fitted instead), air-con system, and even some of its storage bins, cup holders and interior lighting. But it was really that new roof system, carbon fibre buckets, a pair of featherweight aluminium doors and a matching alloy rear deck lid, together with lightweight 19-inch wheels, that were responsible for the bulk of the savings.

Underneath, the car was fitted with stiffer, more purposeful suspension, delivering a reduced ride height (by 2cm) for increased handling prowess thanks to its lower centre of gravity. Of course all these weight saving devices and chassis tweaks were one thing, but Porsche's engineers never forget to add power when they reduce weight, and for that the 987 platform Spyder was equipped with a 3.4-litre six-cylinder engine producing 320hp and 273lb ft torque. It represented a 10hp advantage over the Boxster S of the time, and came with a six-speed manual transmission as standard (a seven-speed PDK gearbox was optional). Thanks to this, and an overall weight of 1275kg, the Boxster Spyder was able to record a 0-60mph time of 5.1 seconds. All told it was the most accomplished and exciting Boxster to date, and Porsche had seemingly found a formula for its mid-engined roadster that worked and worked well. It made sense to repeat it.

With the arrival of the all-new 981 platform in 2012, the Boxster felt grown up. As it had before, the roadster's design language closely mimicked that of the 911, but there was something more resolved about the entire package this time around. It felt as if Porsche had discovered a new level of confidence with the car, and to reflect this each model variant was exceptionally impressive in its own right, even the 2.7-litre car – the entry-level Porsche.

When the GTS model arrived in 2014, though, Porsche was exploring a new concept with the Boxster, and it was a popular one. This new version was the truly sporty Boxster we'd been missing. Where though, did this leave the possible addition of a new Spyder in the 981





model line-up? Those expecting the all-new Spyder to essentially take the form of a subtly reworked GTS would've been sorely mistaken (but probably not disappointed) when the new Boxster Spyder did arrive earlier this year.

This new car not only evolved the Spyder narrative, but it also saw Porsche being braver with the Boxster than ever before. In place of the 3.4-litre engine we'd seen in the previous Spyder, and the aforementioned GTS, Porsche took the unprecedented step of shoehorning a 911 Carrera engine into the 981 chassis. It had already put in the leg work with the Cayman GT4, so being entirely practical it made sense to offer a Boxster with the same (de-tuned) 3.8-litre DFI Carrera S motor too, only with the Boxster Porsche would stop short of labelling it a 'GT' car.

Where the 911-engined Cayman was handed to Andreas Preuninger and his Weissach squad for fine fettling, though, the 3.8-litre Boxster would become the much-anticipated new Spyder. It would feature the largest capacity engine ever used in a Boxster, and would also be the most powerful at 370hp, mated to a six-speed manual gearbox (PDK was not made available this time). The rest of the specification was a familiar role call and weight saving was the name of the game once more. Like its forebear, aluminium doors and an aluminium rear deck lid were fitted, a (mostly) manual roof was employed, again lighter than the typical affair in the other Boxster models. New lightweight 20-inch alloy wheels, and the removal of the air-con system and stereo, also served to make this the lightest contemporary Porsche available at 1315kg.

While the Boxster Spyder may not have received the GT3 front suspension Preuninger dictated for the GT4, it did get larger brakes than its Boxster S counterpart, (340mm front) of which the (330mm) rears were swiped from the 911 Carrera S assembly line. It was lighter than the GT4 too, which equates to a similar 0-62mph time of 4.5 seconds. On paper at least, the hottest ever Boxster sounded absolutely fantastic…

On first inspection at least there's not much to give the game away with the new Spyder. Admittedly there is something about the styling of the latest Boxster Spyder that lends it an air of dominance even at a standstill, more so than any Boxster before it, and perhaps to the untrained eye there's something different about that 'tent'-like roof, too. Is it a 911? You see people wonder. The badging merely gives away that this is a 'Spyder', and boy is it worthy of the name. From the split second you twist the key in the ignition, the typical modern Porsche magic commences; shortly after an animated Spyder graphic dances across on the furthest dash pod, and the continued twisting of key in hand kick starts the engine into being. It's an energetic, gravelly,







The 987 Spyder stands the test of time in many ways, but natural evolution means it shows its age in a few places



aggressive and growling blare that greets, especially from cold, there's almost something deliberately unrefined about it. It's as if the car is firing a warning shot, telling the driver from the outset to expect something different here. For sure, thanks to the lightweight roof, there's far more noise intruding into the cabin from outside than your average Boxster driver will be familiar with, and if you cast an eye upwards you'll spot the folding metal mechanism of the roof, in part this is very 'un-Porsche'. So there's nothing hidden from view here but lest we forget everything you do see is essential. Thankfully the roof arrangement is vastly improved over the previous version, and while it's certainly more of a fiddle than the more run-of-the-mill Boxsters, it's easy to operate once you have the sequence of events mastered.

On the move there's the instant sense of a well-sorted Porsche about this car. The clutch is heavier than you might be expecting on first acquaintance, but it's weighted in a surprisingly purposeful and satisfying way, and likewise the beautifully engineered tight gate on the gearbox is gratifying to use during every gear swapping exercise. Best we get out on the road, then.

The steering feel is beautiful, nicely weighted on the faster roads, easy to manoeuvre in town, requiring small, smooth inputs into the rack before the car acts on them with a sharp and responsive style. But it's the acceleration in this new Spyder that is simply incredible. The 3.8-litre DFI Carrera S motor in here has supposedly been 'de-tuned' on its way from the 991 engine building facility to the Boxster production line, but it's tough to see where that's been achieved. If anything it feels mightier than the same flat-six unit in any 911 Carrera you care to mention. Dare I say this Boxster is almost overpowered as a result; in naval terms the







The old roof system came under heavy fire. This new one is far easier to use yet retains the pretty silhouette of its elder



THE SPYDER'S ROOF:

The previous generation of Boxster Spyder was criticised for its tent-like roof, or rather the difficultly of its operation. Six years on from launch, the 987's roof is still a tricky prospect to the uninitiated, and doesn't offer a smooth process in the event of a sudden downpour. It does however stand the test of time in the style stakes in our view. For the latest iteration, Porsche has improved upon the roof operation, yet it has also managed to retain the stylish silhouette of the original design. Now partially electric, the 981 Spyder's roof is essentially a painless three-stage process, not as straightforward or fast as other Boxster variants, but certainly not the fussy affair of old. The Spyder is a less practical Boxster, but we would say that this should not put you off owning one of these unique, stylish and rewarding cars.

execution of a 911-engined Boxster is something akin to strapping an anti-aircraft gun to a canoe – it's all gritted teeth, blare and devastatingly effortless progress.

Yes that's right, it's utterly thrilling to drive. Forget the statistics, you won't have time to worry about its (4.5-second to 62mph) acceleration time, you're too busy enjoying gorgeous gear changes, a receptive chassis and an audio soundtrack up there with the best Porsche has produced of late. This car delivers plentiful lowdown grunt up to around 5000rpm, but after that it's far from done. In fact it comes on song again, this time with a howling shriek and an urgency that will have you playing dare with your planted right foot all the way up to whatever speed your surroundings might allow. There's been criticism of the long gearing in the GT4, and it's the same in the Spyder. Third is so long it's almost the only gear you need to use, but on the plus side without the requirement to keep changing gears the linear and never-ending acceleration becomes your ultimate focal point.

And then there's the handling. Like the GTS model before it, the Spyder allows a wonderful amount of slip angle before its self-preservation technology kicks in, even with the traction switched on it's entirely possible to broadside this car in damp conditions, which means it commands your full attention at all times. Sure you can push on, but you'll also need to be ready to catch it should things go slightly awry. This balanced setup flatters the driver perfectly, allowing he or she to feel like they're still pushing the envelope of the car's performance and their talents, whilst keeping a handle on ultimate safety at the same time. There's a respect that this car commands and a line that should not be crossed on the road for fear of invoking oversteer, and it's all the better for it.

Why on earth is this car not wearing a GT badge on its rump I hear you cry? Porsche cites that it did not receive any tweaks from the GT department. Those were reserved for its sibling, the Cayman GT4. But from where I'm sitting, with its roof stowed and that exhilarating audio accompaniment turned up to 11, it's tough, very, very tough, to see how the GT4 is markedly better than this Spyder…

Switching from the 981 to the previous generation 987 Spyder, I'm instantly reminded of the transition between the Cayman R and the Cayman GTS experienced earlier this year for our head-to-head feature (*GT Porsche* April '15). For obvious platform sharing reasons there's an easy parallel to be drawn here between the Cayman R and this 3.4-litre Spyder, both share a slightly aged architecture. The 987 is indeed now starting to look a touch elderly by comparison. But this preceding Spyder still has plenty to offer, starting with its weight saving tricks.

This version saved around 80 kilogrammes over its nearest model variant when new. The latest version doesn't even come close, resulting in a 115 kilogramme weight difference between the two Spyders, old and new. The engine in this Spyder is smaller in capacity, sure, but overall its performance is not far away from its newer namesake, in part because it's nowhere near as light. And you can feel that weight difference immediately, before you even select first gear (the car here is a six-speed manual, although PDK was an option on the 987 platform Spyder) and drive this car away. The aluminium doors feel weightless yet structurally solid, the cabin far smaller yet cosseting. There's a stripped-out, pared-back vibe to: this car.

As you'd expect this feel of lightness translates



The original Spyder was not quite the potent machine it might have been. The new iteration, however, is…

to the driving experience. The 987 Spyder does not offer the mind-bending acceleration of its contemporary counterpart, but it is very brisk. While there is not the same wailing audio accompaniment here as in the 981 Spyder, this version is highly responsive, providing smile-inducing pace throughout the power range as you climb up through the gearbox using all of its 320hp. But with just 10hp in its pocket over the equivalent 987 Boxster S, this Spyder is not electrifying. And with the roof design on this car you can only safely achieve 124mph or else you'll be taking what's left of your overhead cover home in several jiffy bags.

On the plus side there's certainly only a lightness of touch required on the controls, the steering feels less weighted than the new car, perhaps less interfered with by electronic gizmos (surely a good thing), and the pedals and gear changes are equally reminiscent of more traditional Porsche roadsters of old. The 987 Spyder is certainly less of a departure from the Boxster recipe, but there was nothing wrong with that recipe to begin with, was there? Like its more modern sibling, this Spyder features a focused chassis, one that encourages lively, enthusiastic driving and which, thanks to the car's lightweight nature, rewards a driver who explores that character trait.

Is it as rewarding to drive as the new car? No. But it certainly has its own charms. The chassis setup is beautifully suited to the car, the suspension was lowered in comparison with the Boxster S, and combined with its increased footprint from wider wheels, it absorbs the punishment of everyday roads well (although there is noticeable scuttle shake here) while still managing to offer additional grip through its increased footprint. The limited-slip differential in this car ensures you can stamp on the throttle hard and it will oblige by skirting around corners at apace, but the sense of speed is almost certainly heightened by the featherweight nature of the car. In short, is it actually as quick as the 981 version? Perhaps not.

Porsche enthusiasts have been crying out for a hardcore version of the brand's two-seater Boxster for a very long time, and with the advent of the Spyder model in 2009 it seemed their prayers were answered. In hindsight though, despite sharing the same name, the two incarnations of the car to date are quite divergent. Despite what we may have thought at the time, the original Spyder was not quite the potent machine it might have been. The new iteration, however, is and you could argue that there's even more headroom yet for taking the Boxster further still toward that of an uncompromised, rawer sports car.

The 2011 car you see in our pictures is offered for sale at RPM Technik in Hertfordshire, for £45,995. The Carrera white example has covered just 16,000-miles with its two previous owners, and it has clearly enjoyed a life of luxury, being well cared for. The pristine paintwork ensures those distinctive rear humps are displayed perfectly, complemented by the 19-inch Spyder alloy wheels.

The latest 981 Spyder is a fantastic car, equal in all but name and Preuninger's touch to its Cayman GT4 cousin, while offering something a little different to the coupé's track-focused spirit. Purely thanks to evolution and the natural passing of time, the 987 Spyder cannot live with it in terms of the overall package it delivers today, but it arguably remains the pick of the 986 and 987 generation of Boxsters.

It played an important part in the Boxster story too, it's a car Porsche clearly used to test how receptive the world might be to a hardcore Boxster, paving the way for the contemporary car we now have in our midst, and perhaps future models aimed squarely at the enthusiast too. Should you be in the market for a second-hand Porsche, you could do far worse than considering a 987 Boxster Spyder. And should you be in the market for a new Porsche, perhaps a Boxster or Cayman GTS, or a GT4, then you should definitely not overlook the 981 Spyder – it could well be the most surprising Porsche package of 2015… ○

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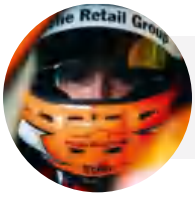
Porsche treated us to some incredible new cars in 2015. Our expert contributors give their own opinions of *GT Porsche's* top four favourites…



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A motoring journo for 25 years, a GT contributor for a decade.



Paul Rees
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A professional Porsche racing driver in Carrera Cup GB.



Jethro Bovingdon
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One of the UK's most admired automotive road testers.

BOXSTER SPYDER



Andrew Frankel:
"I just wish they'd gone the whole hog, given it the proper suspension and called it the Boxster GT4. **Why can't a GT Porsche also be a convertible?** Or is the truth less philosophical and more prosaic: with the Cayman GT4 now in production, maybe the Motorsport department simply couldn't handle the extra capacity. A wonderful car for sure but an ever so slightly pulled punch, too."





Colin Goodwin:
"The Spyder moves the Boxster into a different league. With this engine it feels like a very serious sports car. It's very quick and with the roof down (and up, in fact) sounds terrific. I liked the previous Spyder a lot but the roof was a bit of a bore. I destruction tested one in France on the way to Le Mans and proved that Porsche's warning that you mustn't go over 124mph with the roof up was no empty threat. The whole lot came off and spread itself across the autoroute. The new Spyder's roof doesn't have the same issue and is considerably easier to lower and raise again. It just makes the car more useable everyday.

"The link between the last Spyder and the 550 RS of the early '60s has always felt a bit tenuous. With this new Spyder it is much less so. If I lived somewhere that was warm everyday of the year – San Diego for example – **this car would be my Porsche of choice over a Cayman GT4**."



NEW 911 CARRERA



Andrew Frankel:
"Impressive though it is, I don't understand much of the blind praise that's been heaped upon this car's head. I liked and admired it very much, not least because its envelope of ability has been stretched by more power, more grip, more poise and more pace. But **has too much been sacrificed squeezing those turbos under the engine cover?** For most save the die-hard traditionalists, probably not. Even so it would be naïve to suggest that, for all that's been gained, nothing's been lost. I expect this 911 to divide opinion like none since the launch of the 996 18 years ago."





Jethro Bovingdon:
"How will 2015 be remembered for Porsche? We've seen the back-to-basics Cayman GT4 and the insanely focused GT3 RS but on the flip side there's been the switch from beautiful, sharp normally aspirated engines to smaller turbocharged units for the Carrera and Carrera S. **The purist in me wants to cry.** Although, as I haven't driven the new turbocharged 991.2 as yet, perhaps I'll eat my words."





CAYMAN GT4



Andrew Frankel:
"If you remember this was the car that was never going to happen because GT Porsches are 911s. Then again, you may also remember the standard Cayman was never going to get a limited-slip differential right up to the moment one became miraculously available. **The car feels such a natural step-in point to the world of GT Porsches** it seems preposterous than anyone could argue for its exclusion."



Colin Goodwin:
"This car just blew me away. I knew it was going to be good, very good, because it's the sort of car that Porsche's engineers judge really well. Manageable size, real-world performance, brilliant balance and totally involving. This is the Cayman that Porsche didn't dare give us early on in the car's life – one with the sort of horsepower that it can easily deal with. The GT4 is about half the price of the RS yet delivers as much, or even more, fun. Sensible size, compliant ride, lovely gearbox and above all useable performance. I think **it's one of the top three cars that Porsche has ever made** from an era."



Paul Rees:
"Us Brits love an underdog and I have taken this into consideration, but the GT4 is honestly one of the most engaging and well-balanced cars I have ever driven. Even after jumping into it straight from the GT3 RS I was immediately excited and had a massive grin on my face. The excitement stems not only from the stunning handling, with the impression of a bang-on 50/50 balanced distribution, but also the power delivery. The higher you rev, the faster you go; it's when you really start to lean on the car that it comes alive, and the manual gearbox has a great feel. **I'd have the GT4 over the GT3 RS, it's beautifully designed and engineered,** the RS is three times the price of the GT4 and if it were just twice the car I would go with it, but it's not. Porsche's engineers have done too good a job on the GT4, I would say it delivers 90% of what the RS does at a relative bargain price."



Jethro Bovingdon:
"We've wondered what a Porsche Motorsport-developed Cayman would be like for a long time but the GT4 is probably beyond most of our wildest dreams. I love how physical it feels – the heft of the 'box, the weighty clutch, the way the whole car tingles to the tune of its 3.8-litre flat-six – and that it offers a real challenge for the driver. In bright sunshine and skimming over bone-dry roads, in the pouring rain up on the moors, on a race circuit, **the GT4 feels fabulous wherever you put it. It requires the driver to work**, it rewards technique and you never forget that you're in something special from the way it responds, the way it talks to you. The GT4 is also, I hope, a sign of great things to come. This time next year I expect to be waxing lyrical about the pared-back, seven-speed manual '911R'."





911 GT3 RS



Andrew Frankel:
"The Cayman is not the only departure for the Motorsport department this year. This RS is a very different animal to those that have gone before, too. It's quicker, mechanically grippier and aerodynamically stickier, as you'd expect, but it's also a far more difficult car to control on the limit. **A car for serious drivers, those inclined merely to play would be far better off in a Cayman**."



Colin Goodwin:
"I love the drama of this car's looks: the front wing vents, the wheels, everything about it. First driving impression was just how well it rides. Even better than the previous RS, and that's saying something. Using a sizeable percentage of the car's performance in the South East is asking for trouble so I was pretty excited by the thought of driving it in Scotland.

"I think driving the Cayman GT4 altered my view of the RS. I always hate the 'it's a bit too easy to drive' comment but I did find the RS just a bit too straightforward. I'd love it with a six-speed manual gearbox, even though the PDK is brilliant and faster than any human could hope to be. Drive the car really fast and you don't have the time for traditional gear changing. It isn't just as simple as not having a manual gearbox, **the RS just didn't give me quite the sense of excitement that it's predecessor did**."



Paul Rees:
"I took to the track with the GT3 RS, the ear-splitting howl of the engine above 6000rpm made for a familiar sound, very similar indeed to my Cup car! Traction was there in abundance and the PDK box is as good as ever but I couldn't help feeling it was a little slow on the downshift, even in the most aggressive mode. Launch control feels very impressive with 0-60 in just 3.1secs, but also a lot more mechanically solid and robust than many of its competitors, which is good news. When I started to push the car the four-wheel steering initially delivered a feel that I was not comfortable with. The limit of grip with most sports cars usually appears through the form of understeer, but with this system the rear is being teased out to help rotation into a corner and once I got used to it I wished I had it in my Cup car. **All in all, a stunning, drama-filled supercar**."



Jethro Bovingdon:
"2015 for me is all about the GT4 and RS, both are something to celebrate. The RS could have just been an even grippier, less accessible version of the already extraordinarily capable GT3. It's not. It manages to increase power, grip and significantly ramp-up feel, feedback and adjustability. **In short, it's more 911**. You can't say that in public, people look at you with a blank stare, but amongst the Porsche die-hard that's an apt description. I love its ferocious drivetrain, outrageous looks and the searing excitement it delivers."







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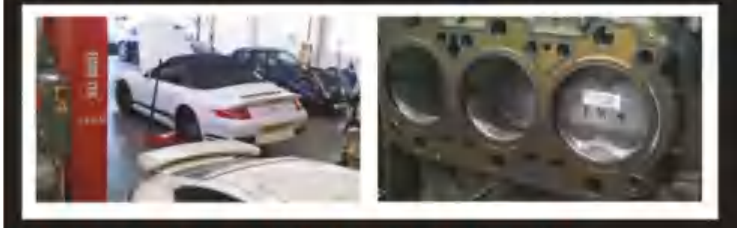
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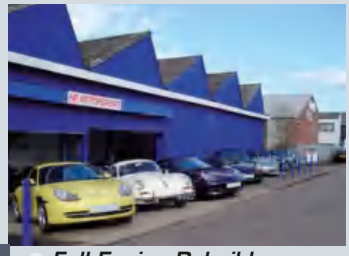


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just looking

by Peter Morgan



Author of 25 Porsche books, Peter has been involved with the brand for 35 years

A visit to southern Sicily reminds Peter Morgan that Syracuse was once an important place for Porsche… and Stirling Moss.

I am a bit of a sucker for old race circuits. The more disused the better – it's something to do with seeking out what can often be the last vestiges of a motorsport history in an otherwise everyday location.

Sicily is a great place to go circuit hunting for those brave enough to rent a car. There's the Piccolo Madonie in the north of the island, home to the Targa Florio until 1973 and arguably the greatest road racing course ever. Porsche had some very big days on the Madonie but today, driving round the old mountain roads is difficult as earthquakes have destroyed sections where once RSKs, 904s and 908s roared. There's also Enna-Pergusa in the island's centre where, in the 1960s and 1970s, F2 and F3 drivers risked all. But Sicily's most glamourous circuit, where the post-war motor racing elite came to escape the chills of northern Europe, was the fast 3.4-mile road course at Syracuse.

In the south-east of the island, Syracuse is a wonderfully exotic city and in Greek and Roman times used to be the island's capital. Overlooked by a stunning Roman amphitheatre, F1 events were held there from 1951-1967 and were usually demo runs for the red cars. It's not difficult to imagine the likes of Fangio, Ascari and Farina soaking up the sun and parading in front of the thousands of Italians who made the events such a spectacle. Nevertheless, in 1955 the Syracuse GP came squarely into the sights of British motorsport fans when Tony Brooks won the first grand prix by a British driver in a British car (the Connaught).

Syracuse also has a special place in Porsche history. In 1960, the factory followed a hunch that the very competitive 718 single-seater F2 car (itself derived from the RSK sports car) might be competitive in the newly revised 1500cc F1. For three seasons until the end of 1962, Porsche entered a fully supported two-car team in the F1 world championship. And for two of those years, the team made the long



journey down from Stuttgart to Syracuse. In 1960, the Works drivers were Graham Hill and Joachim Bonnier, while Stirling Moss drove a Rob Walker-run 718/2 as a private entry. It was the tenacious Moss who set the pace, setting pole and fastest lap and eclipsing the Ferraris. He led until a valve dropped during a late rain shower. Von Trips won but Moss would go on to win four races that year in the Porsche.

The Syracuse GP followed the Monaco GP in 1961 and Dan Gurney joined the factory team in place of Graham Hill. A new flat-eight cylinder engine, designed over the winter, had proven to be a big disappointment and there had been little choice but to continue using the 150hp 'Fuhrmann' four-cylinder engine in the 718/2 single-seaters. While the F1-spec cars weighed just 452kg – just 2kg over the minimum allowed – the four-cam was some 30-40hp down on the Ferrari V6.

"Today, finding the Syracuse circuit is difficult. The track after the start line is now covered by a retail park…"

At the Syracuse race, Ferrari wheeled out its beautiful shark-nosed 156 and while Gurney took pole and had the fastest lap, newcomer Giancarlo Baghetti went into the record books by winning his first F1 race in the red car. It was a strong showing by the Porsches as they finished second and third on what was a fast track. The Ferraris would go on to dominate that year's championship. Unfortunately, Syracuse would not see the Porsches again as there was no race in 1962. That year, the flat-eight was considered race-ready, but Dan Gurney struggled against the new British V8s from BRM and Climax. Nonetheless, despite a continuing power disadvantage, he famously won the French GP at Rouen (another great disused circuit that is worth a visit!). And much chastened by the huge and continuous investment needed to keep up in F1, Porsche withdrew at the end of 1962 to focus on the new production model that would become the 911.

Today, finding the old Syracuse circuit is very difficult. Racing finished here in 1967 and unlike Reims, there is virtually no trace of the old track. Even a purpose-built permanent circuit in the middle of the old course appears to have fallen into disuse. While the latter is a crumbling ruin, the roads that make up the old course show no signs of their past, except for a few streets named after the greats such as Musso and Ascari. The track after the start line area is now covered by a sprawling retail park.

The old hairpin (virtually in the town itself and the photographers' favourite location) and back straight (the SS124) is unmistakable, but there are no fading signs or crumbling marshal's posts that add to the fun of driving round the once challenging course. Indeed, some of the Greco Roman remains that overlook the place and even the old WW2 German defences off the Catania/Messina road are in better condition (Montgomery landed just south of Syracuse in 1943). History, it seems, is rather selective these days ○

The views of the author are not necessarily shared by the magazine.



No harm done in the studio

Story: Johnny Tipler
Photography: Harm Lagaaij and Porsche Archives

Dutchman Harm Lagaaij's work in the Porsche design studios between 1971-77 and 1989-2004 means he was involved in the styling of the 924, 928, 993, 996, 986 and 997.

Harm Lagaaij had two stints in the Porsche design studios; first as an assistant stylist from 1971 to 1977 and again from 1989 to 2004. His standout car during his first stint is the 924, for which he was entirely responsible, with input into detailing on the 928. In the interim he was design manager for Ford Köln (Sierra, Scorpio) and chief designer at BMW (Z1). Then, in his second round at Porsche, he was head of design, in charge of the final revamp of the air-cooled 911 in the shape of the 993, and the company's tidal-wave launch into liquid-cooled cars with the Boxster 986 and 996 series, as well as subsequent models up to his retirement in 2004. His favourite design for Porsche? If pressed, he cites the 997. We caught up with him at the Spa Six Hours to talk about the Porsche design process…

GTPorsche: Who is your favourite stylist? Historically, whom do you admire or who got you into car design in the first place?

HL: I've always been into cars although my background in terms of automobile styling is purely self-taught. At the end of the '60s and early '70s, whoever you were, you couldn't get a job without a state permit in Italy because there wasn't a European union yet. Pininfarina and Bertone looked at my portfolios but they couldn't give me a job because of the state permit problem. The Italian design studios, which have now more or less disappeared, were extremely influential for me, and standing out is, of course, Giorgetto Giugiaro, who for me is the most influential designer from the '60s, '70s and '80s. However, after that, I would say the most influential things in car design spring from the internal studios. If you ask me, 'who is your inspiration from the 1990s to now?' I have to say it's the fantastic studios which each company has now, and how they are led and what their cars look like. And that's also the reason why studios like Bertone and Vignale, one by one, went out of business; not because they were not good enough but because the design studios at the car companies became so sophisticated, so professional and large.

GT: When you joined Porsche in 1971 what was your view of the company at the time?

HL: I was a junior designer and it was really the beginning of my career and so I didn't fully understand exactly what was going on. But my observation was that the 911 was in a difficult period for many reasons. Even then the 911 was not considered modern enough, and you have to have something to replace it with, and therefore the 928 project started off and, because of the circumstances, the 924 was a project like the 914 which we did for VW. Porsche had a very healthy income from research and development for VW, which was a very nice situation when it comes to covering motorsport expenses. That was more or less the financial purpose of the projects which were given to Porsche by VW at the time, to fund motor racing.

GT: When you were given the job of styling the 924 did you think front engines were the way forward or did you somewhat regret it?

HL: No, not at all. Three designers were asked to do a proposal for this VW sports car. I was one of the three and I won the competition. And that was the 924, and although I was supported by a senior designer in how to develop it and address the technical feasibility and the package feasibility, the design was mine from the beginning, even though I was very young and inexperienced.





As a junior, Harm was responsible for the 924. Upon his return to Porsche in later years he worked on the 996 and Boxster…



GT: When you came back to Porsche in 1989 the 964 was already launched.

HL: Yes, the 964 was launched, but in a very difficult period and it wasn't selling very well.

GT: So was your first task then to revamp the 964 into the 993?

HL: Yes. It was done in a very short period. So my life as far as the 911 is concerned was very much influenced by 'please Mr Lagaaij, could you change it?'. I love 911s but I'm not nostalgic about them. I look at each of them and say, okay, well the next step could be this or that, and the current 991, which my successor was responsible for, I look at it and say, 'okay, I understand. What's the next step?' And all around me I see the old 911s becoming more popular by the day, and even my designer colleagues are buying them even though they don't work for Porsche. They all have a 911 tucked away somewhere but I'm one of those who hasn't done it yet, though it will happen one day. But I'm not sure whether I want to spend so much money on one. I'm not nostalgic, you see. I love historic racing; I love going to the concours parades and I love judging them because I know a bit about the history of each car, and I always try to understand exactly what context they were designed in, engineered and produced in.

GT: There's a paradox there, because historic racing is about nostalgia to a great extent. Seeing and hearing a 2.0-litre short wheelbase, narrow-bodied 911 being put through its paces at Spa Six Hours is like going back in time to a truly halcyon era even though it's happening today.

HL: Sure, but even though I've been involved in historic racing for five years I'm still not nostalgic about it. I do it because the budget is

"The car development process is extremely structured…"



lower – or at least in the beginning the budget was much lower to go racing than with modern racing cars, and because you can improve them so much within the spirit of the rules. You can make them faster than they ever were in period. It's a combination of many things being improved, and that's what I love about it. I love improving the cars but once they are finished I want to move on to the next project.

GT: At what point could you see the transition from air-cooled to water-cooled coming up? When were you given a brief to draw the Boxster and 996?

HL: The car development process is extremely structured and today, even more so than 10, 15, 20 years ago, it's become extremely well organised, so it's not just that somebody throws in an idea, it's a huge amount of work before any drawing pen is moved. In the case of Porsche in the beginning of the '90s it was completely clear that it could not continue as it was with the car line-up we had and therefore a very interesting two-year period began, deciding what to do next. In that period there was a group of people comprising engineers, concept engineers, design engineers, and the sales and marketing people who decided what it could be. We shouldn't forget that Porsche was a very small company, even then, compared to today and therefore it was a relatively small group of people trying to come up with a solution. They came up with a lot of concept sports cars and four-seater sports cars. Then the head of R&D came up with the brilliant idea of making the Boxster and the 996 based on commonality up to the windscreen. That was an incredible breakthrough because it not only meant that we had two completely different cars in terms of their concept but also a completely different financial basis, plus the fact that Mr Wiedekin was obsessed about lowering the production costs as much as possible. So the commonality of platform between Boxster and 996 was a stroke of a genius because it meant that Porsche was back. It had the potential to become a healthy company again and the Boxster and the 996 were an incredible breakthrough in the history of Porsche. Putting those two models into production, we were making money again, so that was the turning point in the company's history.

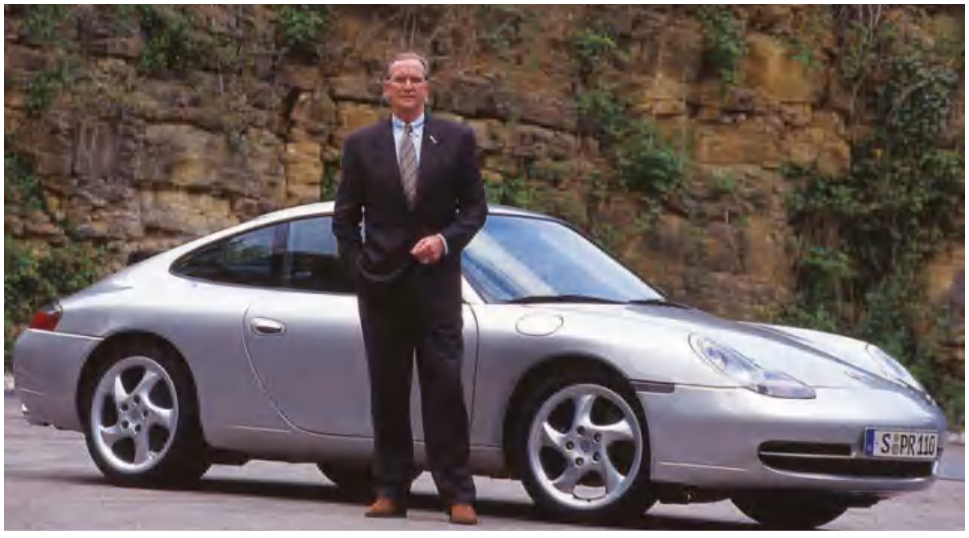
GT: What was in your mind when you were drawing those cars? Were you thinking, yes, we must go back to Porsche's racing heritage, to the 550 Spyder or the 718 RSK, to get some of these styling cues into the Boxster?

HL: Not directly. By coming up with the concept of two cars with commonality, one of which would be the mid-engined two-seater car, then you can start looking back in time. But until that moment in the beginning of the '90s we didn't actually know that we would be going for a mid-





"I love 911s but I'm not nostalgic about them. I look at each of them and say, well, the next step could be this or that"







engined car again. But when that decision was taken then of course you start looking back at the form of the Spyders and the RSK, so there is some form language from those cars, but the Boxster is a very individual shape. It's lovely to look at that motorsport period, but the Boxster is very much a reflection of how much fun a two-seater mid-engined sports car could be for Porsche again.

GT: Talk us through the mechanics of styling a car; do you go from pen-and-paper renderings to clay buck and so on?

HL: It's a very structural process. First of all, you need to know whether it is going to be a complete new car or an evolution. For instance, a complete new car is the Panamera. An evolution is the 991. So they start off very differently. The big difference between the design process in the '70s, '80s and '90s was that in a '90s project, you'd have a 911 group of people and a Cayenne group of people, then you have the Panamera group, and each faculty is represented in this group; so you have a project leader, you have a group of engineers who, for instance, if it's the Boxster, they only specialise in the Boxster. There's a group of designers, and I decide which designers are going to be in that group, and then they start work. If it's an evolution, say, of the next Boxster, then it's a continuous development, where you have certain amount of time available to develop it from how it is now and what it's going to consist of as a face-lift, or as a major face-lift. But if it's a complete new car then it's a totally different story. Then the design process starts with an advanced design period which can take from one to three years if you don't know what the car is going to be like. The Cayenne went through an extremely long period of advanced design and engineering to find out which particular car would suit Porsche best. So those two projects are very different in terms of the time they take and the people involved, and the budget you have available. Each project group has a lot of authority to move on as necessary, therefore these groups stay together for quite a long time. The Boxster group, for instance, goes from the very beginning right up to the current Boxster, because they specialise in that car. The project leader of the Boxster has been the same





"Italian design studios were extremely influential for me"

for 15 years now, I think, and they protect and they develop their baby as best and as competently as possible within budget. Everything is very well structured on how to develop it, the time frame and for how much money. So it's very much a conceptual period when you are not certain of what particular form the car should be. In the case of the Cayenne, as you can imagine, Porsche, having always been a sports car company and deciding to go for an SUV was almost unthinkable but in hindsight it was the best decision it made. Fortunately we found out after asking quite a lot of other car companies whether they would like to do a car together with us, we found VW willing and able to do so. We would develop two SUVs, one with a VW badge and one with a Porsche badge, and the best part was that VW actually paid Porsche to develop it, so that was a win-win situation.

GT: At what point was it proposed to turn the Boxster into a coupé. When did you start thinking about the Cayman?

HL: It was very simple, because you always try to find synergies within one particular car. The best example is the 911 having so many derivatives. The 911 was developed from the very beginning as a Coupé and the next step is a Targa version, then all the motorsport versions, then the Cabriolet, then the four-wheel drive; you have so many derivatives just in the 911 range. The same vision should be applicable to a Boxster. However, on the Boxster it's more difficult, because you cannot do four-wheel drive because of the mid-engine. And then we found out that a lot of people, especially in hot countries, don't ever open up their roof, so then you say, 'why don't we do a coupé?' So it's a very logical step, and you always try to find an original, attractive synergy to enhance the production volumes of a Boxster. And that is the Cayman, which will never sell as well as a 911 Coupé but it's a fantastic car that's underrated at the moment. It's a phenomenal car. It has a tauter chassis and more space than a normal Boxster and it does everything even better. So that's how derivatives are started.

GT: And of all the Porsches you've designed what's your favourite?

HL: All of them have merit in some way. But if pressed, I would say the 997.

Apart from racing historics (like his ground-hugging Shadow Mk1 Can Am car), Harm Lagaaij loves nothing better today than riding his KTM Supermoto around remote and challenging European mountain passes, using his Cayenne to transport the bike there ○

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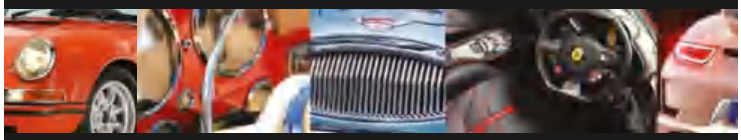


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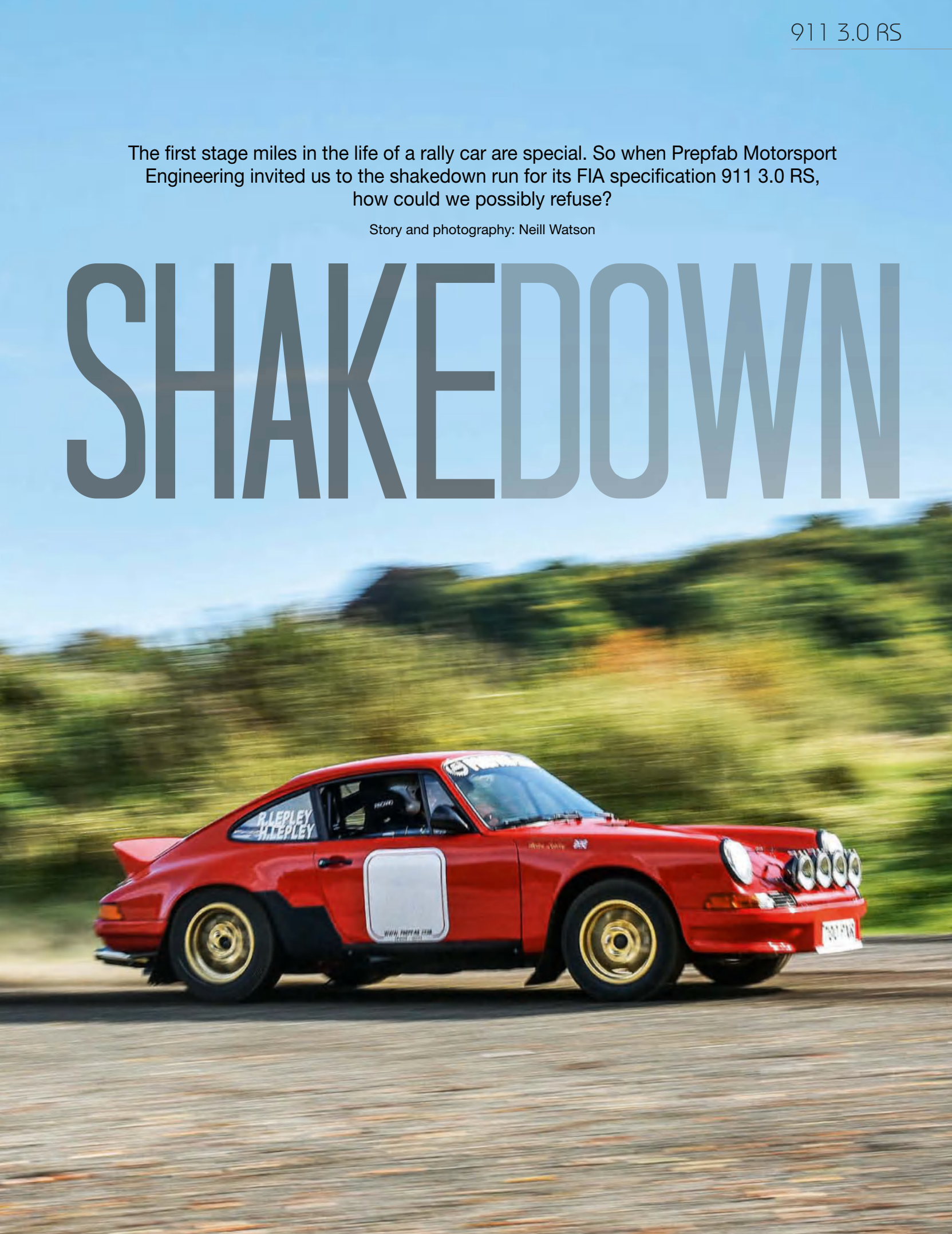
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THE

The first stage miles in the life of a rally car are special. So when Prepfab Motorsport Engineering invited us to the shakedown run for its FIA specification 911 3.0 RS, how could we possibly refuse?

Story and photography: Neill Watson

SHAKEDOWN





It's not very often that you can be at the 'birth' of a rally car. Historic Porsche 911 rally car arrivals are even more rare and so it is with great anticipation that we're heading to a forest in North Yorkshire to witness the first cries of a newly built, FIA Appendix K specification Porsche 911 historic rally car. Rally cars of any genre only ever look like this just the once. We arrive to see the pristine, carpet-free interior that is yet to have the scuffs of competition footwear still shining, the wheel arches free from the scattergun blasting of forest gravel, the engine bay clean and leak-free, a windscreen still intact, without cracks or bullet holes, and the bodywork pristine. Not for much longer though…

As soon as the words 'three, two, one, go!' come over the intercom, it will never look this way again. As the revs soar, the clutch drops and the rear squats off the line, the open treaded gravel rally tyres will commence the onslaught to the arches and mud-flaps. Competition rally drivers have a different philosophy to most Porsche 911 owners. They view a Porsche 911 as an instrument to do a job. While they have no wish to deliberately abuse any car, to them the 911 they are driving is to be driven to the limit as fractions of a second are chased. The constant peppering of gravel blasting the underside may well be audible through the intercom but it is of little consequence. Items such as bumpers, mirrors and, on occasion, windscreens are all considered to be consumables, to be replaced at service by the fastest mechanics you will ever witness as and when required. It's not often you see one looking like this.

The vivid red paintwork gleams between the Yorkshire trees and owner, builder and driver Richard Lepley takes his Stilo helmet from its protective bag as we chat about how the car came to be. "We've been building Porsche 911 competition cars for more than a decade now," he says. "I started out, as a great many people did, on Ford Escorts in 1988. We established the company around then, specialising in Escorts at first." Richard's company, Prepfab Motorsport Engineering, has been building competition cars from the ground up ever since. But what turned him on to the Porsche 911?

"I drove one in 1990 for the first time. Something clicked instantly. I thought it was probably the most beautiful car I'd ever driven. Right after that we started building them. We specialise in historic FIA specification Porsche 911s for customers worldwide these days. My dad used to rally, so I was brought up around rally cars."

With an engineering background in pressure vessel welding, Richard's bodyshell preparation expertise has a good grounding. The reinvention of the original RAC rally event that we all loved in our youth inspired Richard still further. The Roger Albert Clark is held in the ethos of the original event, four days of gruelling forest rallying that sorts the men from the boys. "In 2005 we approached Colin McRae to see if he would drive one of our Porsches. He absolutely loved the idea, but a call from his then employers at the Citroen WRC squad put a stop to it. However, Colin suggested his dad might just be talked into it," Richard relates.

A test in Sweet Lamb forest in Wales brought together Jimmy McRae and his two sons Colin and Alastair. Richard explains: "By the end of the







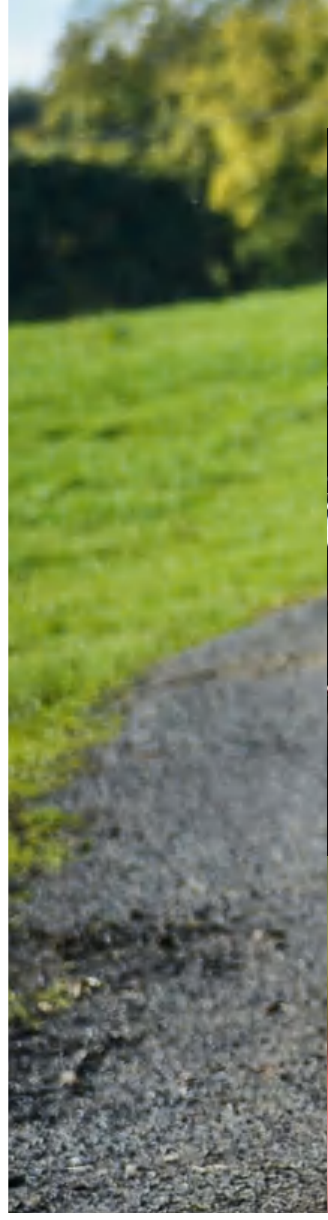




The 911 boasts what Prepfab call a 'full ultimate spec' which uses the 3.0 MFI race engine

"I drove one in 1990 for the first time. Something clicked instantly. I thought it was probably the most beautiful car I'd ever driven"







It's not often you get the chance to see a working rally car this clean and tidy…

day it was obvious that Jimmy was the man to bring the car home. His calmness, leadership and experience at that level shone through. But there's no denying that, bugger me, Colin was blazingly quick!" Ultimately, engine failure meant that Jimmy had to retire from the event but not before leading the RAC for a large portion, showing that a skilled driver could exploit the traction and driveability of Richard's Porsches.

Today, historic motorsport of all genres is big business, with astronomical prices being quoted for a new build Ford Escort complete with the requisite two-door shell, BDA, Hewland dogbox and plate differential. Are historic Porsches in the same price range? "They're getting there," Richard explains. "Certainly you can spend £150,000 quite easily, especially if you subcontract a lot of work. We do everything in-house, apart from paintwork. All our bodyshell preparation, engine building, gearboxes, wiring looms even parts such as pedalboxes are all created in-house." Even so, it still requires a six-figure investment to be the owner of the 3.0-litre 1972 car we see here. "A combination of a shortage of good donor cars, plus the man hours required to build the shell to the required standard and to FIA Appendix K regulations means that it is never a cheap process, but they are significantly cheaper than an Escort," Richard says..

This car started life as a standard 1972 road-going car. The bodyshell was completely stripped of paint, underseal and any captive fittings that were no longer required. After dipping and blasting, the shell was then prepared with all of the allowable strengthening and welding modifications that the FIA regulations permit, all the while keeping weight to the absolute minimum. Everything has to be built to the original period regulations so you won't see complex three-way adjustable dampers with remote canisters here. But a machined billet limited-slip differential plus gear ratios built to the original homologated sizes created in the USA from high-grade materials give the transmission a strength probably never seen in period. It needs to be. For while historic rally cars must be built to the original homologation specification, modern materials, advances in techniques and technology mean that the cars make more power now than they did in the period. Concessions to modern safety standards











include the huge competition seats and the FIA-approved bag fuel tank in the nose.

The engine is a 3.0-litre unit, running with mechanical injection and built with a set of balanced pistons and other internals and camshaft profiles that give the car not just very strong torque but also a reliable 284bhp. Fit that to short rally gearing and with a final build weight of just 960kg and you have a rapid car capable of chasing even the most beautifully built Ford Escort and keeping it honest.

So is a Porsche 911 historic rally car as fast as the equivalent Escort? "Ultimately, in sheer speed, probably not, especially on very high speed stages," Richard says. "A well driven Escort, even against today's modern cars, is still a force to be reckoned with. What the Porsche does bring, though, is traction out of the slower corners, driveability and durability. Porsches inspire confidence and a well setup 911 rally car can certainly challenge in the right hands."

The other thing that is remarkable about the Porsche 911 is the percentage of original road car parts that can be carried over to the finished competition vehicle. "I'd say 85% of parts are reused. Okay, so they are often modified and rebuilt but it's a testament to the original construction of the Porsche 911 that this is the case. With an Escort, it's probably the other way around," Richard adds.

Prepfab build around four or five complete cars per year, plus individual components and ongoing support for a variety of customers across Europe and beyond. A five-year spell living in France with his business found Richard supplying French and Belgian rally competitors with cars: "Even though we've returned to the UK to live, our French customers still come to us for spares and support."

Stilo in place, Richard straps in. A metallic snap from the toggle switches, fuel pumps whirr for a moment, then the starter is pushed. The mechanical injection snaps the 3.0 into life with that lightweight flywheel effect that you only ever hear in competition engines. The Stack rev counter needle whips skywards instantly, then down in a way that a mechanical rev counter never can. With Richard's right foot gently warming the oil, the car idles with that fast, urgent aggression we love so much in a well built air-cooled Porsche engine. Down off the jacks, the car sits high on its gravel specification

suspension, industrial strength mudflaps skimming the forest surface.

A meaty clunk from the gearbox, into first. The lightweight door flips closed with that hollow ringing sound that only lightweight racing doors can make and Richard is away into the forest to shake the car down. The open exhausts of the flat-six bark and echo through the treeline before he comes back into view, LSD shuddering as the tail squats with that 911 traction on the loose surface.

After a few more stage miles, the car pulls in with that unique aroma of hot oil and air-cooled 911 smell mixed with hot mud and brake pads. Everything up to working temperature, the engine is flicked off for a quick spanner check. This is a shakedown test, the car fresh from Prepfab's Gainsborough workshops. Checks complete, a few more runs to iron out the usual new car snags and adjustments, then it's back into the racebox trailer and it's returned to base.

This car's first rally was the Network Q Wales Rally GB – a one-day national event for historics which used the WRC route. It was the first of many apperances. So if you're going to a rally any time soon don't just walk back to the car after the top 20 fast guys have passed. Hang around a little and drink your soup. There may be a bright red air-cooled Porsche 911 coming. You'll know when it's due. You'll hear it coming ○







The car pulls in with that unique aroma of hot oil and air-cooled 911 smell mixed with hot mud and brake pads

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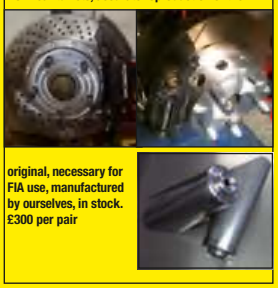
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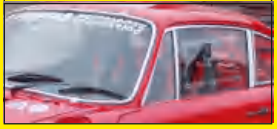
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Classic COLLECTION

The NEC threw its doors open for 2500 vehicles and 69,000 visitors to the Classic Motor Show in November. Indoor classic car shows don't come much better than this…

Story: Simon Jackson
Photography: Rob Richardson







There are a wealth of multi-marque classic car shows out there, but there are only a few worthy of real consideration if you have a diary filled with other commitments. Every November, Birmingham's NEC welcomes a unique and eclectic mix of classic cars through its doors for the Classic Motor Show, something of a 'season finale' for the UK's classic motoring scene, and it's an event we'd recommend. This three-day gig grows year-on-year without fail, and this year was no exception with around 69,000 visitors attending over the course of the weekend, approximately 4000 up on the last year.

The event boasted around 2500 classic cars and bikes on display, with a broad mix of exhibitors, clubs and celebrities. There's always an overriding theme to the show, and this year it was entitled 'She's a Beauty' – designed to bring together women and their prized classics, ultimately highlighting the efforts of women across the classic car scene. Many of the clubs present reflected this year's theme with their impressive stand designs. Indeed, around 250 motoring clubs in period showcased rare and exciting vehicles ranging from pre-war through to modern classics, supercars to saloons. Headline sponsor Lancaster Insurance embraced the beauty queen theme too with its own take on the Miss World pageant.

A 'new for 2015' Pride of Ownership display saw entries setting an exceptionally high standard, and the Best in Show plaudits from the inaugural competition went to a skiff-bodied 1926 Packard 420 restored by boat builder Steve Mills from Long Eaton.

There were more dealers than ever before offering vehicles for sale and reporting brisk business. Amongst the purchasing options was the Silverstone Auctions two-day sale. Silverstone Auctions recorded a total of £4.4 million at its sale, with 80 percent of the 95 lots on offer successfully sold. Managing director of Silverstone Auctions, Nick Whale, said: "It's been a fantastic weekend. The atmosphere at the sale was electric. The key sign of a successful auction is when you have both happy sellers and happy buyers and this time we are proud to have achieved both!"

Amongst the lots was a selection of beautiful Porsches, including a 1956 Porsche 356A Cabriolet, the right-hand drive, matching



There were plenty of beautiful Porsches on display at the NEC, and several club stands worthy of a visit, chief amongst them the Porsche Club GB stand (left)



























numbers restoration boasted a bulging history file and was estimated to sell for between £170,000 and £200,000, the hammer came down at £196,875. A 'Hellgelb' yellow 1973 911 S 2.4 Targa, restored by Moto Technique in Sussex, cleared its £140,000 to £160,000 estimate, selling for £140,625. A Grand Prix white 1988 930 Turbo with just one registered keeper from new and 30,000 miles on its clocks was offered with no reserve and made £112,500.

Of the more affordable lots, a 1990 964 Carrera 4 with just 22,000 miles yet 'needing a little TLC' was estimated at between £30,000 and £35,000 – it sold for £43,875. And a left-hand drive US-specification 1973 911T Targa 2.4 in its original colour of Sepia brown, the subject of a recent full restoration, was estimated at £42,000 to £48,000, and sold for £44,438, verifying Silverstone Auctions' accurate guide prices.

It was the tenth anniversary of the Meguiar's Club Showcase and visitors saw Alexander Louden from Country Antrim clinch the coveted top prize for his 1939 MG TB. Meguiar's also gather together the winners from its year-long concours events to determine a Meguiar's 'Best of Best' car at the NEC event.

The Discovery Channel's *Wheeler Dealers* Live Stage was filled with celebrity hosts such as Mike Brewer, Edd China, Ant Anstead and special guests including Ross Brawn and Sir Stirling Moss. *The Love of Cars* and *Building Cars Live* presenter, Ant Anstead, said: "I've attended the NEC Classic as a visitor loads of times before, but I've never been involved like this. I enjoy having a good old nose around the show and catching up with old friends."

After last year's record-breaking fundraising, the Sporting Bears operated more Dream Rides in an attempt to beat the £50,000 it raised in 2014. The charity fundraising club offers ten-mile rides as a passenger in one of the club's amazing cars in exchange for a charitable donation. The size of the donation determines the status of the car…

The 2016 Classic Motor Show will return to Birmingham's NEC from 11-13 November. In our opinion it makes for a very worthwhile date for your diary ○

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second thoughts

by Simon Jackson



Simon has worked across several automotive publications over the past decade

As the diesel scandal story evolves, Simon Jackson looks at how Porsche is dealing with a potential crisis of confidence…

I suppose it was inevitable that the recent diesel scandal affecting Volkswagen Group cars would eventually widen to implicate Porsche too. I doubt you'll need me to supply much background detail on the automotive crisis that has (and seemingly continues to) dominate the mainstream media on a weekly basis of late. It has hung huge question marks over a car manufacturer, and its associated companies, that used to pride itself (or themselves) on engineering excellence. Suffice to say initial word that the 'defeat device' system (designed to 'trick' emissions test results) was only fitted to VAG's four-cylinder diesel-powered VW, Audi, SEAT and Skoda cars, yet not its six-cylinder diesel Porsche offerings, seemed like wishful thinking, and it transpires that probably was.

Porsche remains tight lipped about the whole affair in Europe, preferring to say little or nothing, perhaps until it has more facts at its disposal, or rather through fear of making things worse. But there will have been a detailed set of documents hastily produced for each market covering what not to say, and how best to spin what they can say – internal and external crisis management and PR departments for all the brands affected will have been in overdrive since the story broke.

In the States things seem different. In early November, Porsche Cars North America (PCNA) voluntarily discontinued sales of Porsche Cayenne Diesel vehicles (2014 model year onwards) in light of receiving a 'unexpected notice' of a violation from the United States Environmental Protection Agency (EPA) regarding the 2015 Porsche Cayenne Diesel. This means that 'until further notice' you can't buy a Cayenne with the 3.0-litre turbodiesel V6 in America. PCNA went on to say it's 'cooperating fully with all relevant authorities', 'working intensively to resolve the matter as soon as possible', and that 'customers may continue to operate their vehicles normally'.

There's no sign of such radical action in Europe, but let's not forget that diesels account for about three percent of all vehicle sales in the States, it's about 50 percent in Europe. While North America remains a vital market for Porsche, with record sales of around 40,000 cars in 2014 (that's almost double its sales figures for 2010 incidentally), only a tiny number will have been diesel Cayenne models, so you could argue it's no huge loss at dealer level. But the Cayenne is Porsche's biggest seller in the USA, with over 13,000 units shifted in 2014, a figure that PCNA had already eclipsed in the first ten months of this year, in part thanks to the launch of the new fourth-generation model.

So, it might not be the loss of diesel sales that will be Porsche's main concern, it will be the damage to the image of the Cayenne, and to that of the brand's persona as a whole. What's more, Porsche Approved Certified Pre-Owned vehicle sales in the States were up 31.2 percent year-on-year in October 2014. It all paints a picture of a buoyant North American Porsche market just prior to the emissions scandal striking. Damaging that momentum would be bad news, as we all know how important cracking the American market has been for Porsche.

The short and longer term implications of all this are as yet unclear, especially in Europe, but Porsche will certainly want to distance itself from any wrongdoing or doubts raised about its engineering competence. No matter what, diesel Porsche cars are still fantastic vehicles to own and drive, the Cayenne was the world's first true performance SUV, and many will care not a jot for the political and environmental wrangling going on, which is their prerogative.

Perhaps the most incongruous thing of all though is that these tests VAG have allegedly 'cheated', designed to measure nitrogen oxides, are unreflective of the real world and have failed to reduce Nox levels anyway, so the argument is largely academic and the testing process surely now redundant. Not that this fact will stop the steamroller of public opinion mind you, and it's opinion and image that makes and breaks brands these days. The purists shuddered at the idea of a diesel Porsche when it was first mooted, it'll be a rather unhappy kind of irony if the concept ends up damaging the marque they hold so dear… ○

"The purists shuddered at the idea of a diesel Porsche, it'll be a rather unhappy kind of irony if the concept ends up damaging the marque"



The views of the author are not necessarily shared by the magazine.

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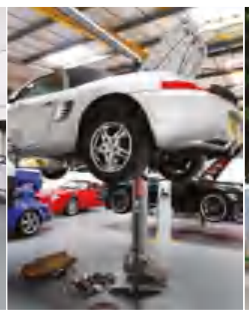


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THE *UN*LIKELY HERO

The WSC95 was a car that started life as a Jaguar, yet came to win Le Mans for Porsche, twice. This tale of Porsche racing success is a rather unlikely one…

Story: Andrew Frankel
Photography: Porsche Archive

In 1951 a Porsche 356 entered Le Mans with an engine boasting – wait for it – 46hp. Yet despite this seemingly insuperable impediment, it not only won its class in a fault-free run from flag to flag, it broke the record for the least amount of time a car had ever spent in the pits during the race. And from that moment to this, Porsche's motorsport exploits have provided a rich seam of superb stories for people like me to plunder.

But while there are some that are more heroic – designing the Porsche 917 to rules specifically configured to preclude the possibility of any such car ever being built, and others more surreal – beating the works Ferrari and Lotus F2 teams in a car that came fourth at Le Mans a fortnight earlier, I don't think than in all those years there has been a more unlikely tale of Porsche racing success than that of the WSC95.

For this is a story of a car that was not only never intended to race at Le Mans but one whose design was already five years old when it did. Yet it won not once, but twice on the trot. Which would have been remarkable in its own right had this car been the creation of a factory full of boffins in Weissach. But it wasn't. When it was born, it wasn't even a Porsche. It was a Jaguar. And, as we shall see, that's not the end of this car's extraordinary claims to fame.

The WSC95 first won Le Mans in 1996, but I guess its story began a decade earlier when the Jaguar XJR-6 became a serious force in sports car racing and just started to suggest that era of the Porsche 962 might just be drawing to a close. The following year the XJR-8 confirmed it, winning eight out the ten rounds of the World Sports Car Championship. The year after that, 1988, Porsche's record breaking run of seven straight Le Mans wins was broken by the XJR-9LM. Porsche could see the writing on the wall and didn't need to wait for further humiliation and withdrew the factory team from further racing.

But the architect of Porsche's downfall was not the board of Jaguar but the man appointed to do its racing: Tom Walkinshaw. It was Tom Walkinshaw Racing that designed, developed and raced the carbon fibre Group C Jags: Jaguar provided the cash, the bare block of its V12 engine and not much else. And while it seems strange to be talking about Jaguars in a Porsche magazine, please bear with me just a little longer because this next bit is crucial.

Because oddly enough, the fastest and most competitive of all the TWR Jaguars never even raced at Le Mans, or at least not until years later when Porsche got its hands on it. In early 1991 the Jaguar XJR-14 was not the class of the field, so much as in a race of its own. In the first part of the season, it was upwards of four seconds a lap quicker than anything else and while the gap narrowed once the opposition had redesigned their cars to cope with it, it was too late to deny Teo Fabi the driver's title that year. Le Mans winner and F1 veteran Martin Brundle described it simply as "the best car I ever raced".

So that's the scene set as we arrive in 1994 to

This car was never intended to race at Le Mans. Yet it won twice on the trot

find an impoverished Porsche with a problem on its hands. The XJR-14 is a museum piece, indeed two of the three original chassis have been damaged sufficiently racing in America during the 1992 season to end their racing careers. Which is where we run into a nice, neat double coincidence of wants. Or rather, needs.

TWR's US operation, based in Valparaiso, Indiana did not have enough work to justify its continuing existence while Porsche was realising that (a) there was nothing that could ever be done to the 911 to make it competitive in sports car racing under the new global GT rules and (b) it didn't have a prototype capable of racing to World Sportscar regulations either.

As the US was far and away Porsche's most important market and the Daytona 24 Hours its most important sports car race, Porsche needed a proven concept that would at least give it a chance in this critical event. So TWR's Tony Dowe and Alwin Springer from the Andial organisation that raced Porsches in the US hatched a plan. The car TWR had designed for Jaguar would become a Porsche.

It was no small job, especially when you consider Porsche only gave the plan the green light in September and the car would be needed for the first practice sessions at Daytona in January. Turning the Jaguar XJR-14 into what would be known as the Porsche WSC95 involved rather more than a paint job and a few badges. The hitherto closed car would need to become open, and its F1-derived normally aspirated Ford HB V8 motor would need to be replaced by a turbocharged Porsche flat-six.

But Weissach got the job done, removing aerodynamic devices both above and below the body that didn't comply with the new regs and rearranging the cooling to get enough air in to and heat out of the new turbo engine installation.









What happened next is not doubted, but why it happened is. Both WSC95s – one converted from the one still functional XJR-14 tub and another built up around a new TWR-supplied tub – were surprisingly slow in testing; the car not reacting with any pleasure at all to its change of circumstances, particular in the aero department. In the normal run of things this would be inconvenient but not catastrophic. But IMSA, which runs sports car racing in the US was instinctively suspicious not only about turbocharged cars but big teams with A-list drivers. In short IMSA concluded the reason Porsches times were so uncompetitive was that the team was sandbagging in an attempt to conceal its ultimate pace. So IMSA decided to make a slow car even slower by imposing a 40kg weight penalty and, far more injurious, a 32mm air restrictor in place of the 34.5mm item allowed until now.

Whether the cars were actually deliberately circulating slower than they could is open to question, because Dowe has gone on the record to say that they were, while none other than Norbert Singer claimed they were going 'flat out'. Either way the effect was the same: stung by having the goalposts moved barely a week before qualifying and left with a clearly uncompetitive car, Porsche did what IMSA must have been hoping for all along and withdrew from both Daytona and Sebring, the two races the car had been built to win. The WSC95 project seemed dead before it even got on the grid.

Of course hindsight is a wonderful thing and it reveals the overwhelming likelihood that had Porsche raced at Daytona even with a severely hobbled WSC95, it would have walked it. In its absence the runaway favourites were a trio of brand-new Ferrari 333SPs that duly qualified in the first three positions. But in the race their threat wilted, the only survivor finishing a staggering 45 laps behind the eventual winner, a Kremer Porsche forced to run to the same rules IMSA tried to impose on the WSC95, and which had qualified in a lowly 17th place. But to Porsche it was a matter of principle, and while there was some talk of taking the car to Le Mans instead, by then its focus was on creating a Le Mans car of its own, the project that would result in the ultimately successful GT1. And you'd have got pretty good odds on the WSC95 winning that race too, given a Porsche-powered Courage managed to come second, a single lap behind the winning McLaren F1.

The WSC95 ran without fault and spent three minutes less in the pits than any other car in the race





Top: Team Joest at Le Mans in 1996 with Jones, Wurz and Reuter. Bottom: 1995, Stuck, Brabham and Boutsen

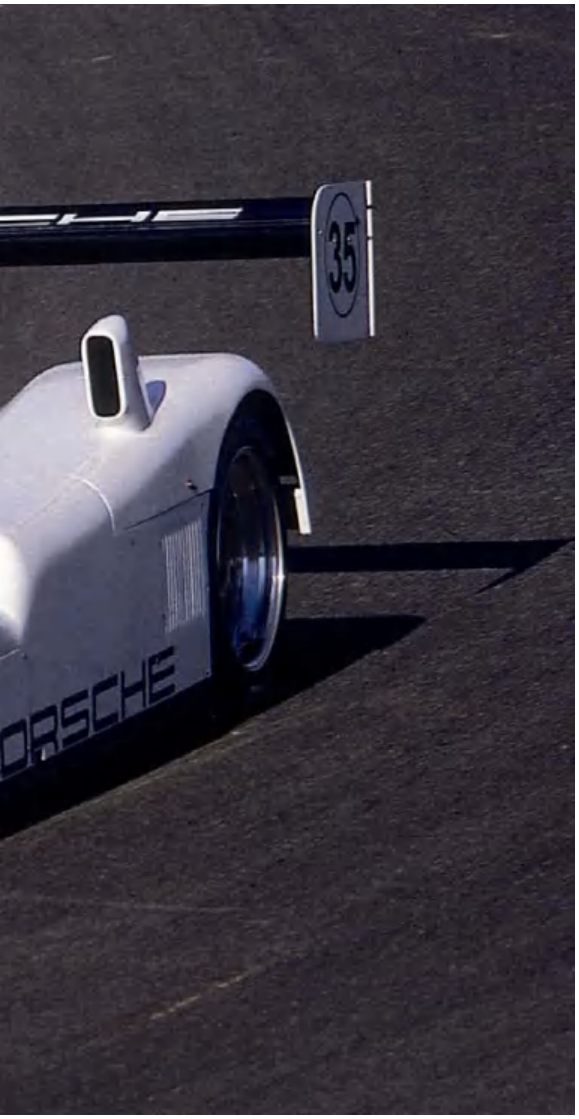
It is early in 1996 before the key figure in this story enters the frame. Although Reinhold Joest is best known today as the man who's team has run Audi's incredible sports car campaign for the last 16 seasons, before then he was a highly accomplished factory Porsche driver and the man who masterminded the Dauer 962 Le Mans win in 1994 as well as back-to-back wins for his own team's 956B in 1984 and 1985. For once short of a car to race, Joest simply rented the WSC95s from Porsche. From Porsche's point of view, it would provide an insurance policy if its brand-new GT1s were to fail.

In the event, the GT1s did not fail, but that did not stop WSC95 chassis 001 – a car which had been born five years previously as Jaguar XJR-14 chassis 791 – winning the race. It had qualified behind the factory cars but if ever there was a lesson in how to run this race, Joest provided it: while the GT1s were delayed by unforced errors, the WSC95 driven by Davy Jones, Alex Wurz and Manuel Reuter, ran without fault from car or driver. Of the 354 laps it completed, it led for all bar 18 and spent three minutes less in the pits than any other car in the race. It won by a single lap. Crucially given what was to happen the following year, Porsche agreed before the race that if Joest won, he could keep the car.

Outwardly, Le Mans in 1997 seemed a similar affair, insofar as the WSC95 won again with another trouble-free race, this time with Michele Alboreto, Stefan Johansson and Tom Kristensen at the wheel. In reality the circumstances could scarcely have been more different.

First, and in stark contrast to the previous year, Porsche did not even want the WSC95 in the race, presumably so that nothing could steal the thunder of its GT1's hopefully triumphant return. But now the WSC95 was Joest's own possession, there was nothing the factory could do to stop him. Second, this time around it was the WSC95 that was left to chase the factory cars for most of the race. One of the GT1s succumbed to driveshaft failure after 14 hours, but the other continued serenely and untroubled until halfway through the 21st hour.

I was there and remember very well what happened next. Suddenly all eyes were on the big screen as the lead Porsche with Ralf Kelleners at the wheel was flying down the Mulsanne







Straight at better than 200mph, towing a ball of flame. An oil line had fractured and by the time Kelleners got the car stopped, the Porsche was truly ablaze. Happily the driver was able to bale out unsinged, but he had parked far from the nearest marshals who had to sprint down the track with their extinguishers and attack the now brightly burning Porsche.

It was left to Alboreto to drive the ancient WSC95 over the line and claim victory. The fact is, and it is worth dwelling upon, that had Porsche had its way and the WSC95 not raced, Le Mans in 1997 would have been remembered not as Porsche's 15th win, but McLaren's second.

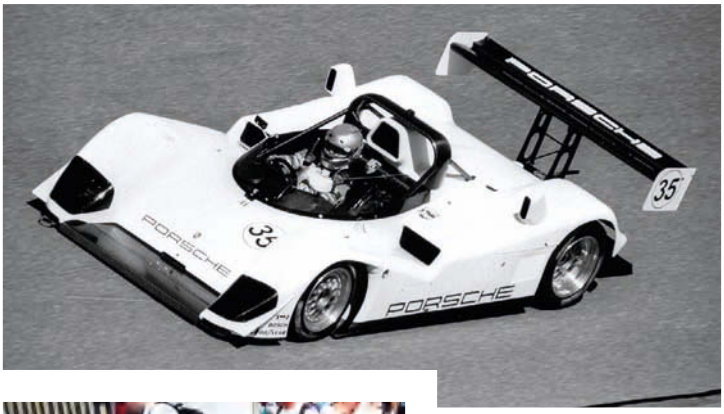
Indeed there is an argument to say it should not be counted as a Porsche win at all: the car had been designed by TWR and was owned and run by Joest in direct contravention to Porsche's wishes. In what way, therefore, was it a Porsche? Well, it had a Porsche engine but the Mirage and Rondeau that won in 1975 and 1980 both had Ford engines and no-one regards those as Ford victories. But there is a difference: the WSC95 was created by Porsche in Weissach, albeit using a proprietary chassis. It was developed in Porsche

Had Porsche had its way, Le Mans 1997 would have been remembered not as Porsche's 15th win, but McLaren's second

wind tunnels and run as a semi-works team in 1996. And if it was a Porsche in '96, the same car must have been a Porsche in '97. Call it anything else and you'd have to call into question the true identity of all sorts of cars, not least those Jaguars that ended Porsche's winning run at Le Mans…

The WSC95 did run at Le Mans in 1998, this time as a full factory two car squad with Joest, having kissed and made up with Porsche, running the cars; but there was to be no fairy tale hat-trick. Both Porsche and Joest's car qualified down the order and retired while, finally, a much revised GT1 took the win Porsche had sought for so long.

But we won't let this tale end on a sad note. So let's go all the way back to the beginning, back indeed to another track and another date. It's 18 August 1991, and a Jaguar XJR-14 has just won a round of the World Sports Car Championship at the Nürburgring. Its brand-new chassis is stamped 791. And if you'd told anyone there that same chassis would win Le Mans not once, but twice in succession five and six years from now, they'd have laughed in your face. But it did, joining Joest's own Porsche 956B chassis 117, Ford GT40 chassis 1075 and the 'Old Number One' Speed Six Bentley as the only individual cars in the history of Le Mans to win the race twice. And while I cannot be sure, I'd bet it remains by some margin the oldest car ever to win that race. Not bad for a car never intended to be there in the first place ○









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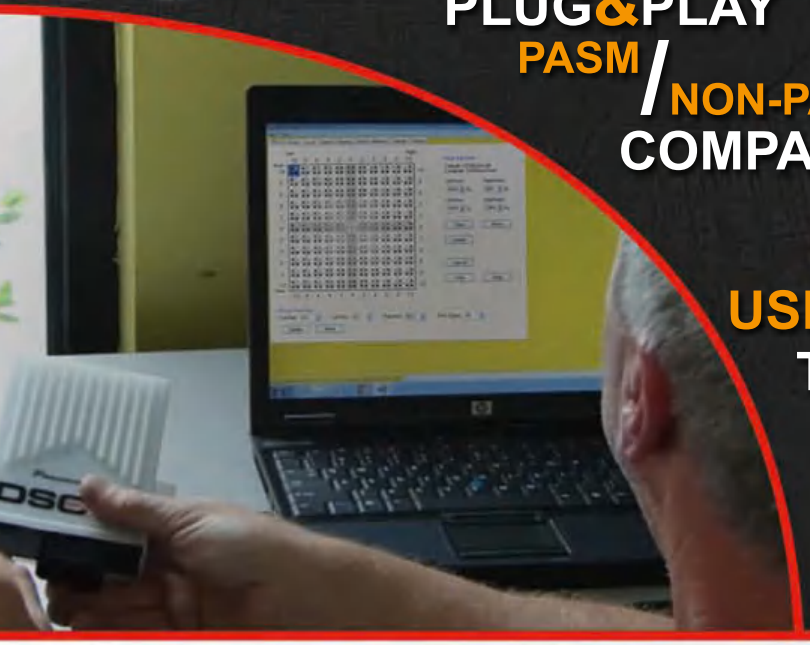
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Class **Reunion** *Part Two*

In the second instalment of our Rennsport Reunion V coverage, we discover more about this amazing gathering that only takes place once every four years, and what the legendary Porsche drivers have to say about it.

Story: Simon Jackson Photography: Porsche















Top: The 'legends' gather for a group picture
Above left: Derek Bell
Below right: Hans Stuck







Working on the assumption that you caught part one of our two-part Rennsport Reunion V coverage last month, then you'll already be familiar with how this Porsche-centric event got started. What you'll also hopefully be familiar with is the brace of iconic Porsche race and road machinery that was on display at the sunbaked Laguna Seca circuit in California for this weekend from heaven. But what good would exotic racing cars be without some experienced peddlers to drive them?

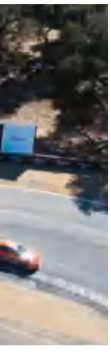
Porsche has long been a car maker that wholly captures the imagination of any of its works drivers, often leading to a life-long association with the brand, and that was something beautifully illustrated at this fifth running of Rennsport Reunion. With a hook like 'Legends of Le Mans', you'd assume there might be a fair few drivers in attendance to have undertaken the 24-Hour race in a competition Porsche, and you'd be correct. Porsche pulled out all the stops at Rennsport Reunion, gathering together an unprecedented number of previous Le Mans pilots, 11 winners amongst them, the youngest being Earl Bamber at 25 years old, the oldest being 87-year-old Hans Herrmann who won the great race in 1970. But there were more victors; Briton Richard Attwood (1970), Jacky Ickx (1976, '77, '81, '82), Hurley Haywood (1977, '83, '94), Jürgen Barth (1977), Derek Bell (1981, '82, '86, '87), Hans-Joachim Stuck (1986, '87) as well as Nick Tandy (2015). And all seemingly loved the opportunity to join in the experience. Current 919 Hybrid drivers Mark Webber and Brendon Hartley were especially proud of taking part, Webber stated: "It's the most well-attended of all the Porsche events I have been to. The paddock has a more traditional, more old-school racing, feel which is how I think it's been in North America forever."

Hartley added: "It's been a warm welcome. It's good to catch up with a few Porsche legends and friendly faces – you can feel the passion"

Winding the clock back further still, Hans-







Above: Webber was in a relaxed mood all weekend, but didn't take to the track. He prefers to drive the 919 in anger and who can blame him!



Joachim Stuck, a first time attendee to Rennsport Renuion, was clearly enjoying himself all weekend: "The cars you see here are just amazing. They're all in incredible condition. And the best thing is that I've contested races in many of them," Stuck said. "I'd received invitations before but somehow it always coincided with a race weekend. If I'd known just how fantastic this event was I would have immediately cancelled all the other commitments and come straight here."

Five-time attendee Hurley Haywood echoed those thoughts: "The event has never been as organised as this and we've never seen as many beautiful cars as we're witnessing here this weekend," said the three-times Le Mans, and five-



A HOT LAP OF LAGUNA SECA

"Would you like a lap of the track in a 918 Spyder?" is a question that only has one answer: "Yes!" And so it transpired that we were lucky enough to jump into a 918 Spyder for a few hot laps of the epic Laguna Seca circuit, with none other than Dr Frank-Steffen Walliser, head of Porsche Motorsport, at the wheel.

After Dr Frank (as he is generally known at Porsche) settles himself in and fiddles with the 918's settings, we're off in hot pursuit of a pair of second-generation 991 Carreras, one piloted by Jacky Ickx, the other Hurley Haywood. Halfway around the first lap we stop alongside a train of fellow 918s, all awaiting a convoy lap of the track, and at the front sits American motor racing legend Bobby Rahal in a bright green 918 equipped with HRE wheels.

"Hey!" Rahal causally remarks as our two cars (separated at birth) draw alongside one another.

The bizarre situation isn't lost on Dr Frank: "Jacky Ickx is in front of us and Bobby Rahal is behind. It's a good job we're in a 918 Spyder!"

Dr Frank was himself responsible for the 918 project before his ascension to become head of Porsche Motorsport, so his connection with the car is highly evident: "All of my babies have come home," he romantically states. "I'm so pleased to drive one on the track here, it's a lifelong ambition."

It may be the case that Dr Frank sits behind computers screens most of the time, but believe us he can drive too, as demonstrated when we finally set off around the track in anger. With two accomplished Porsche racing legends ahead of us, it takes all of the 918's grunt to keep in touch with them as we howl flat-out down Laguna Seca's start-finish straight. In the corners the 918 slides at the rear, mounting the kerbing, which neatly keeps the back end in check, before full power is once again applied. This is meant to be a demonstration lap but neither driver is hanging around, so much so that the organisers jump up and down waving for us to slow after the first tour. Happily no-one takes heed.

The track is a challenging mix of medium speed corners and undulating straights, but as we approach the famous 'corkscrew' the track is completely unsighted at the braking point and under turn-in. It's not the dramatically demanding corner you might expect, and indeed it's the next turn that requires more skill, but all the same it's a real experience. Suffice to say, it's one we won't forget in a hurry…







Above: Editor Simon with Dr Frank in the 918 Spyder
Top: The view of the two new 911 Carreras from the 918…





















Above: The public got within touching distance of the 919 Hybrid
Below: Hans Stuck on the event's main stage

times Daytona 24-Hour classic winner. "I'm particularly delighted to see how many visitors have brought their children to share the fascination of Porsche with them. I'm sure they'll be fans for the rest of their lives."

Hans Herrmann was enjoying the chance to mix with his fellow Porsche drivers, both old and new: "It's always wonderful to be reunited with so many drivers from the early days and talk about old times. It is important for the future to keep these memories alive. The young drivers need to know how it was back then when the steering wheels were wooden and we had no computers like today," he said.

Briton Nick Tandy was enjoying himself just as much, meeting legendary Porsche drivers and earning the respect of many for his intimate knowledge of their exploits. Tandy took time out of his schedule to walk and talk us around his latest steed, the 919 Hybrid which was present providing demonstration laps of the Laguna Seca circuit. Nick took stints at the wheel along with fellow Le Mans 2015 victor Earl Bamber, the demonstration runs allowed many of the 50,000 visitors to see the Le Mans winning car in action for the first time. The duo weren't the only LMP1 drivers in attendance though, along with the aforementioned Webber and Hartley came Neel Jani, making his first appearance at a Rennsport Reunion.

Other modern drivers included Jörg Bergmeister, Michael Christensen, Wolf Henzler, Patrick Long, and Frédéric Makowiecki. Representing Porsche's GT exploits was the 911 RSR, appearing just one weekend prior to its visit to Road Atlanta for the 2015 Tudor United SportsCar Championship. All of the drivers, both from yesteryear and contemporary times, were in demand for autographs.

Indeed the autograph hunters and other assembled fans were both dedicated and appreciative of the time each and every 'legend' driver (there were 50 well-known names in attendance in total) took to interact with them. And away from the pressures of a race weekend or media engagement, each of the drivers and even the Porsche personnel, many whom had flown over from Germany, were relaxed and more than happy to chat with the mix with Porsche fans from all walks during the course of the event.

Far from being a Goodwood-style event where the drivers are ushered away from the fans, Rennsport Reunion welcomes all in a Porsche family manner that epitomises the way the brand goes about its business. As Nick Tandy nicely summarised: "Being here makes you feel part of a family, and that's something I've found that is very special to the values of Porsche. From all the people that work with Porsche for a long time, it's good to know that we will support each other. It's not just you out on your own because you might live in a different country to your colleagues, it's all one family, which is great."

This is perhaps what separates the Rennsport Reunion event from anything else. Well, that, and an unrivalled collection of stunning Porsche cars providing fans with a fascinating journey through Porsche's illustrious motor racing history. We'll see you at the next one in 2019… ○

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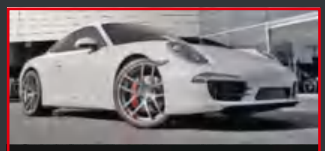
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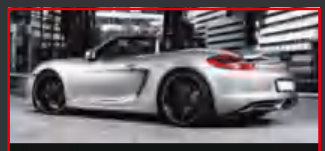
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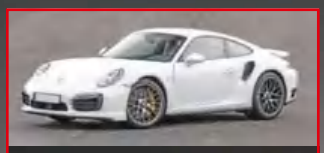
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Full Circle

The tyres on your Porsche are as highly engineered as the car itself. Continental recently demonstrated to us the importance of those four black circles…

Story: Simon Jackson Photography: Continental Tyres



Generally speaking, the vast majority of motorists don't pay enough attention to the tyres fitted to their cars. It's a sorry state of affairs but it's one the major tyre manufacturers are well aware of and one that they are constantly striving to transform. As a Porsche enthusiast you might consider yourself in the minority camp here, priding yourself on paying extra attention to the rubber your car uses to make contact with the road, and you'd be right in making that assumption. Typically speaking when cars have migrated to their third or fourth owners since new, only a small percentage of them will be found sitting on manufacturer recommended Original Equipment (OE) tyres. Not so with a Porsche. Porsche customers are unlike most others. Even a ten-year-old Porsche on average still remains shod with OE recommended tyres, and that says a lot about your typical Porsche driver, if there is such a thing. Chances are this trend is born by Porsche owners trusting the brand's choice of tyre for their particular car, but it's how Porsche might arrive at that choice which is the most interesting aspect of this relationship, and one leading tyre manufacturer Continental was happy to share with us.

Believe it or not, one in three new cars produced in Europe comes fitted with Continental tyres. That equates to more than 500 current model approvals across a range of automotive manufacturers, but the way in which each of those manufacturers works is very different. Each car maker requires different characteristics from a tyre, and they all use distinctive codes by which to differentiate those particular tyres. Porsche's standard is the N-rating system. An N-rated tyre must meet a certain set of parameters as established by the manufacturer, working with the car maker to arrive at a suitable end product. With the

N-rating system, the number (stamped onto the tyre's sidewall) that follows signifies the generation of tyre, so N-0 would be the first generation of a given tyre, N-1 the second 'improved' generation of tyre, and so on. Any tyre manufacturer must work in harmony with Porsche at the development stage of any model's life, which can be some time before it comes to market, as Richard Durance, Continental UK's Automotive Engineering Manager, explains: "Continental is involved with a new car from the concept stage. We're working in a virtual world at that point as there is often no physical car to test with. This can often be two or three years before a car comes to market."

Working with Porsche's engineers is a rather unique prospect in the marketplace, developing specific compounds for use across its range of vehicles. It won't surprise you to learn that Porsche prefers a tyre to be biased towards handling, to a point where it might be sacrificing the typical manufacturer emphasis (or rather obsession) on rolling resistances and the like. What might surprise you is that ultimately any test that a car maker might invent is far more thorough than any required by a government body by law – and that's globally speaking. You might assume that recent changes to tyre labelling requirements would have changed that emphasis but the message from the tyre firms is clear: these changes simply do not go far enough in informing consumers of the facts, some of these labelling conventions are even downright misleading. For example, the noise ratings you'll see listed for a new tyre actually refer to noise levels for pedestrians, not noise recorded in the cabin, which would naturally be far more relevant for many consumers.

So, just how is a new tyre born? Two or three tyre manufacturers (in the case of contemporary Porsches that's typically Michelin and Continental) are approached by a car manufacturer with a brief, as Richard explains: "At the concept stage the car manufacturer provides us with an 'envelope' within which to create a new tyre: for example the tyre must be X in dimensions, to fit inside Y arch space."

Joint tests are undertaken with the car maker to determine the correct recipe for its given model, and several explicit steps are repeated until a tyre is created that meets their expectations. Ultimately this provides a manufacturer such as Porsche with a spread of options before the green light is given for production.

"Objective and subjective analysis of ride comfort is important to manufacturers," Richard explains, "but today Continental is under a lot of presume from car makers to deliver tyres that aid economy too."

In fact there are a number of key considerations for any new tyre coming to market including but not limited to: noise;



safety; comfort; robustness; and price. And there is a rigorous approval process that sees any given tyre evolve drastically during its birth…

"At the end of the day a tyre is an engineering exercise and therefore it is a compromise," Richard continues. "Before we go to a manufacturer with a new tyre it goes through 20 internal indoor tests. It has to meet Continental's own sign-off procedures before it can be sent to a manufacturer for approval."

What this means is that a company like Continental might produce a brace of tyres each year that never even see the light of day. Continental tests 120,000 tyres every year, and spends over £100 million on research and development. 1000 engineers in eleven different locations and test facilities across the world are constantly working. As a result, there isn't much its engineers don't know about tyres, but even in this modern age producing and testing a physical tyre remains the best way to analyse its performance. While 90-95% of a new tyre's behaviour can be simulated virtually by modern computer technology predictions, it's the final 5-10% that requires fine-tuning, and this can't be performed virtually, it's a time consuming process that invariably means creating various iterations of a new tyre design.

Each global market has unique test requirements dictated by its governments, too, and these are becoming more complex with time. Even if a specific car or tyre isn't planned to go to a certain market it still has to meet with all market regulations just in case this occurs later in a model's life cycle. And as the common practice of platform sharing enables car manufacturers to produce new model variants at an ever-increasing pace, this shortens the window of time available for the tyre manufacturers to work on a matching product. China is an especially tricky market and a good case in point thanks to its mix of good and bad roads, which means finding a balance that suits both environment and road conditions is tough. At Continental's facility in Hanover it can literally throw a car down a track and simulate all weather conditions. Elsewhere internal test machinery includes the use of what's called an 'exciting rig', a piece of machinery that moves a wheel up and down to simulate road use.

Steering-feel requirements vary dependant on a manufacturer's requirements. How heavy a car's steering may feel generally, at zero, or off-centre can be manipulated by tweaks to the design of the rubber blocking in the centre of a tread pattern. And all of the human senses come into play when evaluating a tyre. "Noise is a subjective thing, but we need objective data in order to analyse it," Richard tells us. "An 'arcing head' (a dummy human head with microphones in its ears) is used for measuring noise, and this is compared with subjective

BLACK CHILLI

Continental tests 40,000 different compound samples per year, one its finest products is Black Chilli. This adaptive compound continuously changes to suit the road surface. Originally the Black Chilli compound, a breakthrough discovery that came in 2005, was initially designed for bicycle tyres. Polymer advances and the latest findings helped design Continental's Sport Contact 3 in 2010 – the first use of the Black Chilli compound in car tyres. We tested a Macan S Diesel on Sport Contact 5P SUV tyres in Spain with Continental, and found them to be highly impressive.



N-RATED TYRES

Unique to Porsche, the N-rating system is given to tyres that have been approved by Porsche engineers for use on Porsche vehicles. All Porsche Centres and many independent specialists can fit N-rated tyres and offer a wheel alignment and balancing service. Advances in tyre technology mean that tyre wear or even mixing different brands, patterns or N numbers, even if from the same manufacturer, could result in an increase in road noise and significant changes in shock absorption, steering and handling characteristics. There is a wide range of N-rated tyres available for all Porsche models.



noise measurements to determine whether or not our findings are correct or worth acting upon."

Airborne and structure-based noise is measured but how humans perceive noise is important. The frequency of a sound can be deemed annoying by some and yet not by others, so analysis is a very subjective process. During new car development some test mules may not have all of their interior trim for example, therefore higher levels of noise may be detected – this is taken into account. "A tyre is ultimately a pocket of air, when tyre hits a bump in the road the volume of air inside is disrupted - this creates a wave effect." Richard adds. "It's this phase shift, or Doppler shift, that creates cavity noise, causing a ringing effect."

Generally speaking the stiffer the pattern or compound, then the noisier it is and in looking for ways to control this cavity noise Continental came up with the ContiSilent tyre – a tyre with a special foam coating bonded to the inside of its tread area producing a damping effect on the sound waves caused by a rolling wheel, thus reducing cabin noise. There are over 30 different components like this in a tyre, and each can be fine-tuned to aid each and every aspect of a tyre's performance, from wet braking prowess to overt noise travel or steering feel, even small adjustments to tyre pressures can improve levels of comfort vastly.

Understanding exactly what goes into creating the rubber fitted to your Porsche is a far more in-depth subject than you might first assume. As Porsche enthusiasts it's a fair assumption that you already understand this better than most, but the real battle for tyre manufacturers is arguably far simpler than all that. Tyre pressure monitoring systems help us these days to keep tyres at the correct pressure, but the message to consumers is that they must still keep an eye on their pressures, and that we as (UK) motorists should change our tyres before they reach the minimum legal tread depth limit of 1.6mm. Continental recommends users change tyres at 3mm and it employs in-built reminders to work at these levels. This is not a ploy to earn more money – it's simply a safety issue. Follow any car in the wet, the rooster tails coming off the rear tyres are largely formed from water being channeled down the centre of its tyres through gullies, a minimal amount escapes via the sides of the tyre. If these central gullies wear low then the tyre is not able to channel and clear the same amount of water. Given how much it rains in the UK you'd be right to give this more thought than you might already. Only a small amount of tyre stays in contact with the road at any one time, this is typically referred to as a square patch. In reality once any rain ducts or gullies are removed from this equation, this patch becomes even smaller, so it's vital that this contact patch is in good shape. After all, the development work of brands like Continental and Porsche are worthless if your tyre is too far worn ○

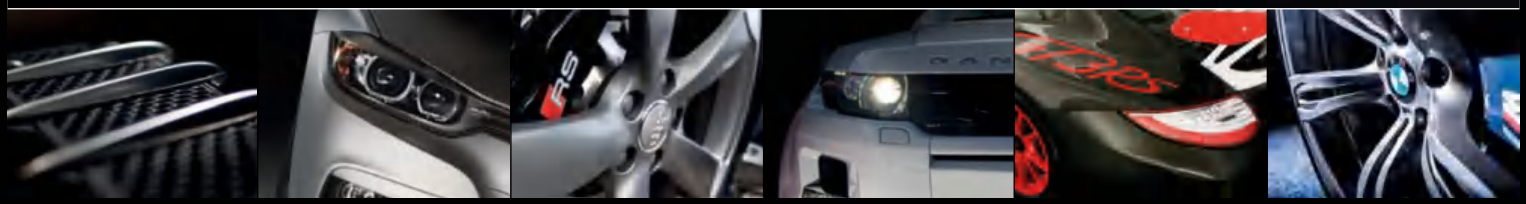


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M5 F10/M6 (STAGE 1) » 680 BHP
M5 F10/M6 (STAGE 2) » 730 BHP
F10 520D » 240 BHP
F10 530D » 305 BHP
335i/135i/X6 » 370+ BHP (+DE-LIMIT)
123D » 252 BHP
316D/216D/116D » 160 BHP
318D/218D/118D » 225 BHP
330D E90 » 296+ BHP
320D E90 » 215 BHP
420i/320i/220i/120i » 275+ BHP
435i/ F30 335i » 390 BHP
428i/328i » 295 BHP
535D / 335D / X5 SD » 355+ BHP
640D/335D/535D/435D » 390 BHP
730D » 305+ BHP
X5 4.0D / 740D » 370 BHP
X5 3.0D » 305 BHP
X6 X5.0I 4.4 » 500+BHP
X6 M50D/X5M50D/550D » 450 BHP

MERCEDES-BENZ
A200CDi/C200CDi/E200CDi » 175 BHP
A250/C250 » 260 BHP
A45/CLA45 » 420 BHP
C300 HYBRID » 285 BHP
A220CDi/C220CDi/E220CDi » 215 BHP
C350/CLS350/E350/S350 » 315 BHP
E400 /C450 » 420+ BHP
C400 » 400 BHP
'63' 5.5 Bi-TURBO ALL MODELS » 690+BHP
'500' 4.7 Bi-TURBO ALL MODELS » 498+BHP
S65 (W222) » 780 BHP
SL65 BLACK » 720+ BHP (+DELIMIT)
SL65 AMG » 690 BHP (+DE-LIMIT)
'55' AMG KOMPRESSOR » 580+BHP
C63 AMG 6.3 » 530+BHP (+DE-LIMIT)
C63 AMG 4.0T » CALL FOR DETAILS
SL63 AMG 6.3 » 560+BHP (+DE-LIMIT, RE-MAP & LOWER ABC SUSPENSION)
CL600 Bi-TURBO » 580+ BHP
SLK55 AMG » 420+ BHP (+DELIMIT)
320 CDi V6 » 274 BHP
350 CDi V6 » 312 BHP
420 /450 CDi V8 » 358 BHP

ALL 2015 RANGE ROVERS AVAILABLE
R ROVER SC 5.0 » 580+ BHP
R ROVER 4.4 SDV8 » 395+ BHP
R ROVER 3.0 TDV6 » 315+ BHP
R ROVER 3.0 SDV6 » 345+ BHP
EVOQUE/DISCO SPORT 2.2 DIESEL » 240+ BHP

PORSCHE
997 TURBO/S 3.8 INC PDK » 611 BHP
997 TURBO 3.6 » 625+ BHP
997 GT2 RS » 670+ BHP
996 TURBO/GT2 » 600+ BHP
997 CARRERA S PDK » 400+ BHP
997 CARRERA S » 376+ BHP
997 CARRERA PDK » 368 BHP
997 CARRERA GTS » 435 BHP
997 GT3 UP » 436 BHP
BOXSTER 3.4S » 336+ BHP
CAYMAN S » 342 BHP
MACAN 3.0D » 315 BHP
CAYENNE GTS » 440 BHP
CAYENNE TURBO 4.8 » 578+ BHP
CAYENNE TURBO S 4.8 » 600+ BHP
CAYENNE 4.2 DIESEL » 450+ BHP
CAYENNE DIESEL » 315+ BHP
PANAMERA TURBO » 600+ BHP
PANAMERA DIESEL » 315+ BHP

EXOTIC / MISC
FERRARI CALIFORNIA » 487 BHP
FERRARI 599 » 647 BHP
FERRARI 430 » 525 BHP
GALLARDO » 546 BHP
LP560 » 608+BHP
LP640 » 707 BHP
HURACAN » 640+ BHP
AVENTADOR » CALL FOR DETAILS
MCLAREN MP4-12C » 700 BHP
MCLAREN 650S » 720 BHP
MURCIELAGO LP640 » 707 BHP
MASERATI GHIBLI 3.0S PETROL » 470 BHP
MASERATI GHIBLI 3.0 PETROL » 400 BHP
MASERATI GHIBLI 3.0 DIESEL » 312 BHP
MASERATI GT/QPORT » 438 BHP
MASERATI GT S / MC » 479+ BHP
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next month



We look into the increasingly popular trend of 911 backdating…

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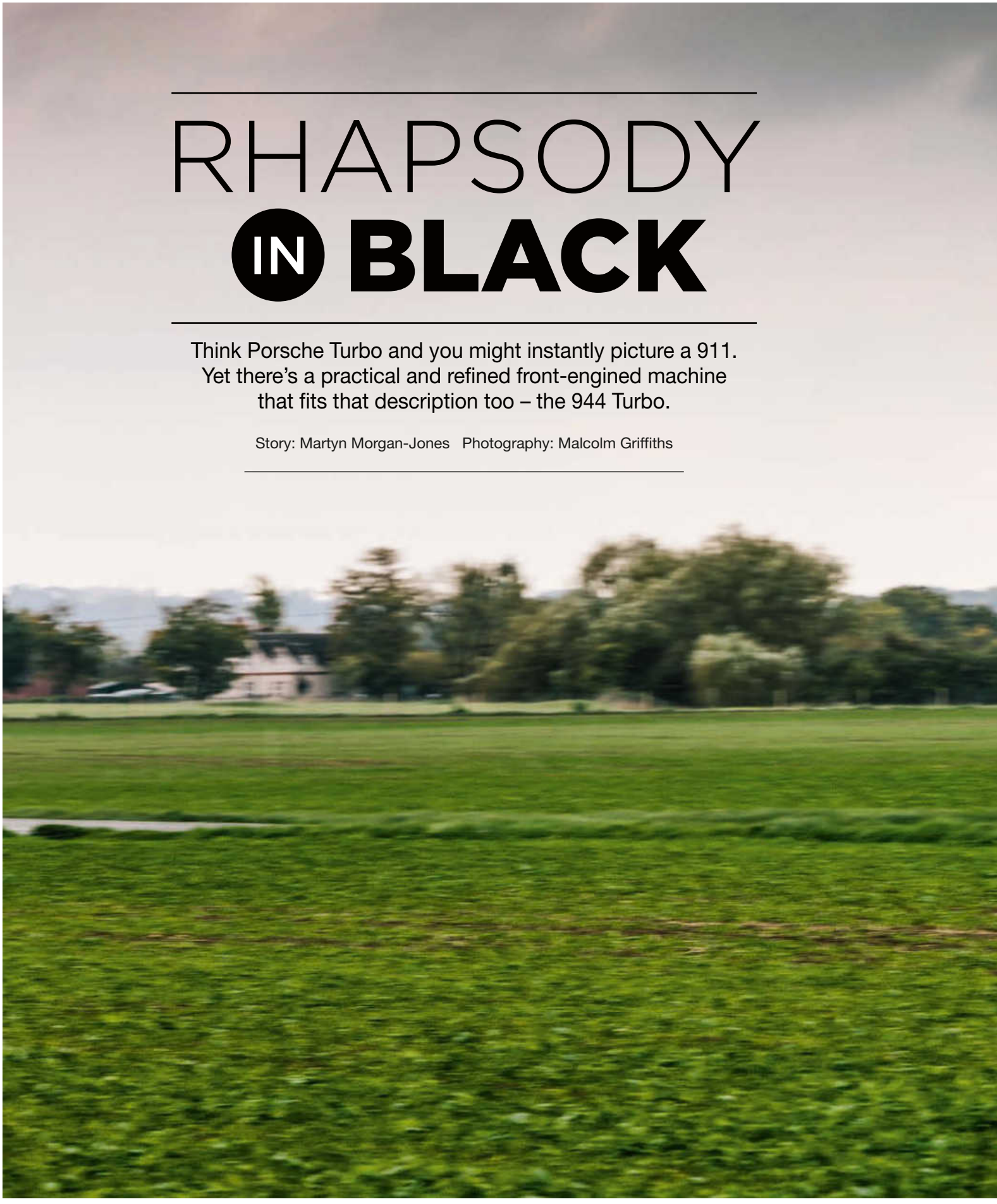
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RHAPSODY IN BLACK

Think Porsche Turbo and you might instantly picture a 911. Yet there's a practical and refined front-engined machine that fits that description too – the 944 Turbo.

Story: Martyn Morgan-Jones Photography: Malcolm Griffiths




C592 SBL

In recent years, Chris Knowles has developed something of a penchant for Porsches, particularly those that have garnered 'classic' status, with the result that he now has quite a collection. His association with the marque actually began much earlier, however, in the 1970s – a period when he ran a 911E as a daily driver… until the threat of running costs unfortunately intervened.

"I began my career as a graduate apprentice with Bristol Siddeley Engines," explains Chris. "And I was given a thorough grounding in design and manufacture, typical of the way in which apprentices were managed in those days. Along with a senior manager, I subsequently worked on the combustion system of the Pegasus engine, which powered the Harrier. While at Durham University I joined the University Air Squadron, and decided flying was more addictive than factory work. So I signed up for the BEA/ BOAC cadet pilot scheme, and started working as a pilot for British European Airways… which became British Airways following its merger with BOAC in 1974."

Engineering has always remained a passion for Chris though, cars too, and on the advice of his good friend and classic racer Peter Foster, with whom he trained to fly and work at BEA/BA, he bought a 1971 911E. This was in 1974. "The quality of Porsche engineering has always impressed," he reveals. "I loved that car. However, it became prohibitively expensive to run and maintain, partly due to two broken windscreens costing £190 each. Regrettably, in 1976, I decided to sell it. Nevertheless, it was always my intention to return to Porsche."

And return he did, albeit some four decades or so later. "I retired in 2004," Chris elaborates. "Prior to that I'd been working in Dubai, as SVP Flight Operations for Emirates Airline. While there, I bought a 1996 993 Cabriolet. We sold our house in the UK and moved to France and, having sold the 993, bought a 1987 3.2 Carrera. Unfortunately, in 2008, my wife was diagnosed with a brain tumour. Thankfully, due to the wonderful French health service, the surgery and treatment went very well and she has made a terrific recovery."

Understandably, health issues, particularly major ones, are rather salutary, and they often make you question your lifestyle decisions and whether changes should be wrought. Which is exactly what Chris and his wife did.

"We were enjoying life in France, and



"The obsession with perfection, to the detriment of originality, is so wrong. Patina is everything"

extremely grateful for the wonderful medical care and attention we received," Chris impresses. "But the tumour did impact hugely on our lives and made us question and re-evaluate things. The upshot was that we decided to move back to the UK, to be closer to family and friends. We also decided to downsize, release some equity, and truly enjoy life. My wife is passionate about golf, playing with fellow colleagues on courses around the UK and Europe. For me, life is driven to an extent by the focus on Porsches, both the restoration and use of them."

Chris, who is far from blinkered when it comes to classic cars, and adopts a broad-brush approach, has never subscribed to the view that the 924 and 944 are not 'proper' Porsches. True he owns a number of the company's air-cooled alumni, but he also owns a trio of water-cooled versions, including this stunning 944 Turbo you see here.

"I have always liked the water-cooled cars," he acknowledges. "And was taken with the 944's appealing shape, its engineering and balance. And I had begun to appreciate that under current values the 944 was a lot of car for the money. Which got me thinking… and looking. I spotted this 944 Turbo on Pistonheads. It was a very low mileage, two-owner example, and looked fantastic."

Chris wasted very little time in contacting the seller and was surprised to discover he was the only one who'd shown a real interest. "This was probably because the car was in Cornwall, at the very tip of the county. Anyway, I made my mind up that I was going to make the long trip. And, if the 944 was as good as had been inferred, and as good as it looked in the photographs, I was going to buy it. I travelled down, saw the car, which was indeed in excellent condition, had a test run, and bought it! The key to buying a good car is to get the right one. I'm not always successful, but I certainly came up trumps with this particular 944!"

He certainly did. Chris is now the proud owner of a genuine sub-21,000-mile car, in factory original and totally unsullied condition. To use the vernacular: it's a cracker! The 944 was so original in fact, it still sported its original rear tyres, which were almost fossilised through age… more on this anon.

The 944, a 1982 introduction, and unquestionably all-Porsche in its engineering and makeup, took some of its styling cues and design features from the 924, 924 Turbo, and were 924



Carrera GT. From the latter came the flared rear-wheel arches and, with mass production in mind, when it came to choosing the material for them, Porsche opted to use steel rather than the GT's flexible polyurethane. The 944 also boasted a large rear spoiler, front spoiler, subtle detail changes to the front bumper, and colour-coding. All of which helped furnish it with an aggressive and head-turning presence.

The 220hp Turbo variant, which arrived in the spring of 1985 (the UK would receive its right-hand drive models in November), was treated to detail changes such as the rear skirt and 'Teledial' wheels. More importantly, it was even more of a technical triumph than its normally-aspirated progenitor. Quick too. It could breeze past 150mph with ease and sprint to the benchmark 60mph in around six seconds. What's more, it was capable of delivering this kind of performance day in, day out, as a huge amount of work had been undertaken to ensure that the 944 Turbo was a model of reliability.

Porsche's fingers had been well and truly burnt with the Series 1 924 Turbo, the reputation of which had been rather stymied by overheating issues and the relatively short lifespan of its all-important and moniker-providing component: the turbocharger. To counter this, the bearing housing in the 944 Turbo's K26 KKK unit was water-cooled and the system was designed to continue circulating coolant until the oil temperature dropped to a pre-set temperature.

Then there were the added delights such as: electronic boost control, air-to-air intercooler, Bosch Motronic engine management, knock sensor, ceramic inserts in the exhaust ports to improve throttle response as well as reducing cooling requirements, forged rods, and thicker liners. Understandably, the chassis and drivetrain came in for the same sharply-focused scrutiny too and the Turbo soon sported a stronger clutch, stronger gears, a transmission cooler, stupendously-effective brakes and uprated suspension.

The 944 (and 924) helped pull Porsche from the brink of financial ruin and went on to generate a healthy revenue stream. Even so, for many years, and in many circles, these front-engined, water-cooled beauties were seemingly cloaked with a mantle of automotive obscurity. And, when they did occasionally emerge, especially during their formative period, they were usually looked upon with more than a











degree of blinkered scepticism, especially by die-hard, rear-engine, air-cooled enthusiasts.

Thankfully this situation has changed, with both models, and their many variants, being recognised as true Porsches and respected as such. Indeed, low-mileage and premium examples, such as this car, are sought-after and command high prices.

"I'm lucky in that this 944 Turbo has done so few miles," appreciates Chris. "The original owner, who had the car until 2012, used it very sporadically and covered few miles. As did the second owner, who apparently wanted to move on to something else. But the car has been well cared for. However, in my excitement, and rather foolishly, bearing in mind that the rear tyres had been on the car since new, as well as there being some clutch judder evident, I decided to drive the 944 home from Cornwall. Well, not that long into the return journey, the vibration from the rear became unbearable. Commonsense prevailed and I pulled over at a services and had the car recovered by the AA. I didn't get home until 3am!

"It's since been to Autofarm, where it was inspected by senior technician Mark Henderson. Mark really knows his stuff, having been around these cars since they were introduced. As well as four new, but period-looking, tyres he suggested a number of other safety and service related changes and there were some minor paintwork defects and wheel scuffs that also required attention. The car has now been through Autofarm's workshops and everything has been done as impeccably as ever.

"What's very important to me is originality, especially in terms of a car's appearance. I've some general experience with antiques too, in which preserving and maintaining originality is paramount. But, with classic cars, many people seek to restore to as-new condition. In doing so, they destroy the history, which is thereby constricted to the paper work that accompanies it. The obsession with perfection, to the detriment of originality, is so wrong. Patina is everything. With Autofarm's help, this 944 has been brought up to a very good standard. But, crucially, especially with regard to the interior, it has retained the all-important patina, which is its connection with the past.

"And, the car not only looks good, and factory original in content, it also drives so well. I'd done my research of course, and expected it to be a great drive. Even so, I'm impressed at just







how good it is. The ride is very pliant, the seats are extremely comfortable, the braking is absolutely first-rate, and the performance is extremely good… with little in the way of turbo lag. What truly impressed me however is the handling balance. The way it flows through corners, with such poise, is truly remarkable. I believe in driving my cars as often as possible, and I can see myself using the 944 Turbo rather a lot. It's that good."

I agree, it's very, very good. And, what makes the 944 Turbo worthy of such plaudits is Porsche's unerring attention to detail and painstaking development process. Then there's the racing programme of course. It's often been said that racing improves the breed. With the 944 Turbo, that's certainly true. The company drew deep from its well of racing experiences with turbocharging technology, which it had developed via cars such as the 917/10, 917/30, 936 and 924 GTP and every detail, even the minutiae, was analysed, assessed, and, if deemed necessary, improved.

As a result, the 'blown' 944 was at the top of the turbo game when it arrived and is still a serious force to be reckoned with today. Nevertheless, don't run away with the impression that this is some thinly-disguised racer. It really isn't. As Chris has alluded to, in addition to the stellar performance and impeccable handling, the 944 Turbo is extremely practical and very civilised indeed. In many ways, it's the perfect Porsche package ●

"I believe in driving my cars as often as possible, and I can see myself using the 944 Turbo a lot"

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ONE YEAR AGO JAN 2015



Twelve months ago we grabbed a first drive in the 991 GTS and liked what we found. Andrew Frankel reported: "In specification alone, the GTS is far better to drive than it has any right to be."

Off the back of that, we took a drive in its namesakes: the Boxster GTS and the iconic 928 GTS. We also took a look at how Porsche created the iconic 911 Carrera by diving deep into the Carrera 3.0 and the 991 Carrera to fully understand the evolution of the species. Likewise we also took a look at the 991 Targa, the 996 Cabriolet and a rather special Kremer Racing 935 K3 replica. Lastly we bid farewell to former editor, Stuart Gallagher, after his 13 years in the big chair.

FIVE YEARS AGO JAN 2011



2010 was quite a year for Porsche and to celebrate we brought together a selection of Porsche cars for one large group feature. Our activities featured the Cayenne S Hybrid, 997 GT3 RS, 987 Boxster Spyder, 911 Turbo S, and the fabulous GT2 RS. Of the GT3 RS we found: "Then you jump in the GT3 RS and you realise that there are very few, if any, driver's cars as good as this. It's so immediate, involving and engaging."

Further into the issue we caught up with Porsche's R&D boss, Wolfgang Dürheimer about the future of the brand, just before he jumped ship to Bentley, replaced by Wolfgang Hatz. Hopefully it wasn't something we said…

TEN YEARS AGO JAN 2006



An action shot of Chris Harris sideways in a 993 RS could only mean one thing: ten years ago we took the mighty 911 to Wales for a blast on its finest roads. Harris reported: "Approachability is the 993 RS's key asset in its claim to being the best car the company's ever made." And: "I contemplated stealing this car: the thought of facing a custodial sentence for it was no problem."

We also drove a 997 Carrera rental car around the 'Ring, and took a detailed look at the 996 generation of 911 with our *Essential Guide*. We also celebrated the magazine being 50 issues old by taking a look back at our favourite features.


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Our *Long-Term* team explain the trials and tribulations of running a Porsche in the real world …

Ryan Stewart – ***2007 987 Cayman S***

Priced out of the 911 market, Ryan decided a Cayman was the next best option. He purchased his 987 S in August 2015 with a view to putting it to work on track. The car runs PASM and a Porsche Sports exhaust, but for weight purposes there are no additional frivolities.



Matt Biggs – ***1981 911 SC***

The SC is tatty but it was exceedingly cheap for an air-cooled 911 so Matt couldn't resist. Still learning the ways of the 911, Matt's still not sure how to drive the car properly but it looks and sounds fantastic and was great fun on its first track outing – he's looking forward to more.

Twitter: ***@PawnSacrifice***



Matt Biggs – ***1986 924 S***

A project bought unseen for £400 as a non-runner. Replacement engine, SPAX coilovers and 968 ARBs, a home-made quicker steering conversion and race seats already fitted. Plenty of track days, a rally in France and a trip to Le Mans to see Porsche's return all under its belt.

Twitter: ***@PawnSacrifice***



Jack Wood – ***2010 997 GTS***

Purchased in November 2014 the GTS was something of an impulse buy. The Meteor grey Carrera 2 started life as a demonstrator at Swindon Porsche and is fully-loaded with extras. So far it is living up to the hype and has been a pleasure to use.

Twitter: ***@Jackkwood***



Jack Wood – ***2004 996 GT3***

Bought in April 2012 from a reputable Porsche specialist, it was pressed into immediate service as a combined daily driver and track car. Now a third car, the GT3 has been resprayed with the latest self-healing paint protection film by PaintShield and mechanically overhauled.

Twitter: ***@Jackkwood***



Martin Spain – ***2002 996 Turbo***

After an extensive search for the perfect 997 Carrera 2S, Martin was "seduced by the boost" and ended up with a 996 Turbo. Purchased in April 2014 as a weekend and occasional track day car. Other than the outrageous performance, it is the famous Turbo script on the rear that he loves.

Twitter: ***@MartinSpain***



Rob Richardson – ***1978 911 SC***

Rob's an old hand when it comes to tinkering with classic cars, and has even owned and modified a 924 in his time. Having hankered after a classic 911 he's finally tracked down his perfect project. Expect to see this '78 911 SC being given the 'Richardson touch' over the coming months…

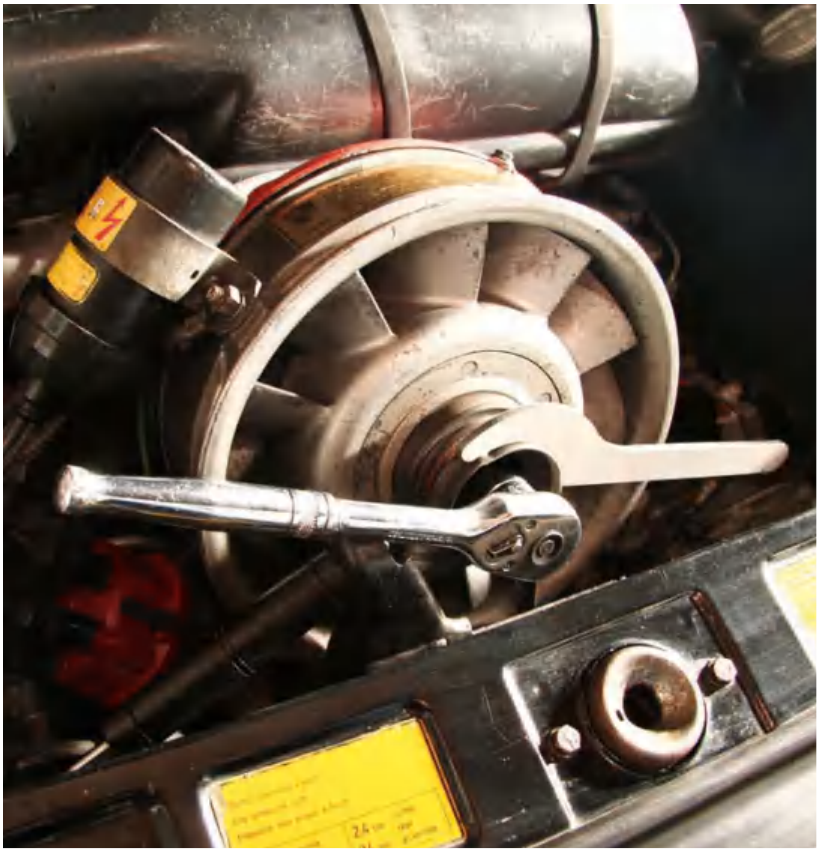
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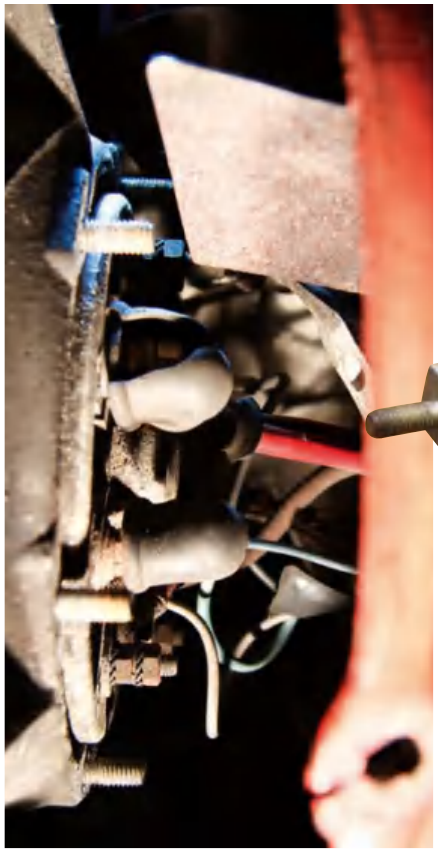


1978 911 SC

So winter draws on, it's dark, raining all the time and the 911 is away in the garage. This means I've spent some time on my 'to do' list of improvements ready for spring. The good news is it's a short list. The car has been brilliant and totally reliable. The only dynamic issue since lowering the car has been a bit of bump steer, so I've ordered in a steering rack spacer kit from Pelican parts in the States. This should be sufficient to fix the issue and is a really cost-effective way of addressing the problem without the need to invest in extended track rod ends. That's the theory anyway; I'll report back on the fitting and results in another issue.

One small job I've finally got around to doing is to fit my vintage Heuer Trackmaster stopwatch. During the 1970s Heuer offered 'economy' stopwatches like the Trackmaster and Trackstar which featured simple pin lever movements. These pin lever movements were accurate (with a tolerance of +/- 1.5sec per hour), reliable and super durable making them perfect for automotive applications. I bought this particular watch a few years ago and installed it my 1968 Triumph Herald (it was modified with a Goodwood period weekend racer-style) taking inspiration from early 911 builds and period racers I'd dreamt of while I was building it, so it's great to be able to fit it my actual 911.

I've also made a start on cleaning up the engine bay by removing the fan for painting as it's the only really scruffy part left. I'm not aiming to make the bay mint, far from it, it's a usable car and I want to maintain that, avoiding it (or parts of it) looking new or overly restored. The fan removal itself was pleasantly straightforward; I invested in the correct pulley holding tool to remove the fan belt







Rob has been wrestling with his fan assembly in a bid to clean it up, but he has been losing the fight

and it made the job a breeze. Getting at the connections at the back of the alternator was a little fiddly but with the alternator duct removed and some skinned knuckles it was all disconnected. I labelled the harness up so I could make sure it all went back in the right place. Separating the fan and the alternator has been an entirely more difficult prospect. Years of heat and corrosion have caused both the alternator to weld itself to the fan shroud and the fan to refuse to let go of the alternator shaft. Despite the application of heat, penetrating oil and as much hammering and pulling as I'm brave enough to administer, I just couldn't separate the two. I opted to mask and carefully prep the unit complete; not something I'm over the moon about as I'd like to have put it all back together stripped and rebuilt nicely, but I don't want to break it when it's fully functioning. A couple of coats of primer and paint later it looks a lot better. While it was out I cleaned all the threads and replaced all the nuts holding the alternator duct on with new nylocks. With the loom carefully connected back up, the fan clamp back on I set about re-tensioning the belt. Happily the belt was new this summer so didn't need replacing and I was able to reshim it as it had been removed. There are so many engineering details I love about this car and the more I work on it the more I find them. In this case the shim system for tensioning the belt is ingenious!

I've not started the car since putting it back together, so fingers crossed there are no issues. I'm saving that for when I've got the bump steer kit fitted and can get the car out of the garage. I'm hoping we'll have a dry day and I'll be able to at least get it up to temperature and run it round the block. Hurry up Spring, I want to play!

Rob Richardson



987 CAYMAN S

This month saw the Cayman back out on circuit and living up to its 'Track Project' title perfectly. Chalking up another full day of action at Bedford Autodrome, I joined a group of Regal Autosport customers to take on the GT configuration under threatening grey skies. Needless to say the weather made for some interesting spectating as well as driving. The event fell just after SEMA, meaning I returned with a head full of race car inspiration, eager to take it out on the little 987.

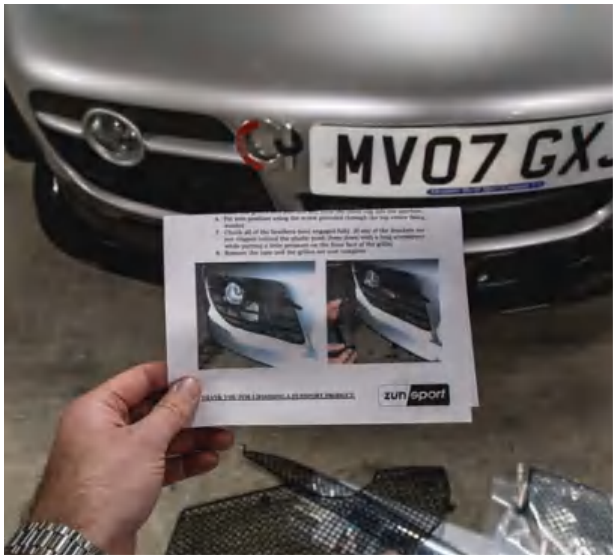
First up, and in preparation for winter, I decided a little preventative protection was in order. Having cleared eight years of grime from the radiators early on in ownership, I've grown increasingly frustrated with reaching in and clearing leaves blocking them since. It's something that affects all Porsches with the front mount radiator layout and can often be the cause of leaking or corroded units. Thankfully, mine were in good condition and I opted for Zunsport mesh grilles to keep them that way. Zunsport stainless steel mesh grilles are designed and made in Great Britain and fit straight over the top of the stock Porsche plastic grills. To match the front set I also went for the optional rear bumper grilles. Finished in black powdercoat they key in with the Boxster Spyder side vents perfectly, too. Knowing that tyres are one of the most important aspects of any track build, most of this month has been spent pondering the various merits of track specific rubber.

Upon searching one particular name kept cropping up: Pirelli Trofeo R. It seemed to be the go to tyre for numerous GT2 and GT3 owners with shining testimonials to support their choices. Searching further I learned that the tyre also comes as standard on the new McLaren 675LT – music to my inner geek's ears. Designed with an asymmetric, dual compound tread pattern, the outer edge of the Trofeo R is designed to give maximum cornering performance while the inside gives great water dispersion and stable straight line braking performance. What's more the Trofeo R is fully road-approved. Knowing the Cayman would spend just as much time travelling to the circuit as driving around it, the Pirelli Trofeo R seemed hard to beat. I selected 245/35 and 265/35/19 sizes to mount to a fresh set of fifteen52 Tarmac wheels in 8.5" and 9.5" widths. Being a little wider than a conventional tyre of the same size the Trofeo Rs gave me more rubber on the ground than the tyres they replaced.



















Ryan has fitted new Zunsport grilles (right), and shod the Cayman in stylish fifteen52 Tarmac alloy wheels

Mounting of the wheels was taken care of by the guys at Regal Autosport and at the same time they converted the hubs to studs. The final modification before hitting the track was to swap the original seats for some much lighter Recaro Pole positions. Although not heated and the lightest version of 987 seats available, the adjustment motors and airbags on the old seats piled on the pounds. Mimicking the style of a 964 RS, the leather Recaro Pole Positions are the perfect style for this 'Clubsport' project.

Out on the 3.8-mile long Bedford GT circuit the Cayman performed faultlessly once again. The new seats are a welcome addition, enabling me to concentrate more on the task at hand rather than sliding across the transmission tunnel, and as the track dried through the day, this became an increasingly obvious asset. The amount of grip provided by the Pirelli Trofeo R tyres, once up to temperature, is quite astonishing. With the addition of the tyres the Cayman has certainly jumped up a league or two in cornering speed, battling cars five times the price and considerably more powerful. It's better in all aspects of driving and it's hard to pinpoint a drawback. Braking, corner exit traction and, of course, turn-in are all improved. The best thing of all is that the geometry is able to remain unchanged for conventional tyres. A unique feature of the Trofeo R is they do not need extreme camber angles to work effectively, allowing a hassle-free universal wet and dry weather setup. Less time on the tools means more time in the seat, and that can only be a good thing!

With a little weight taken out and considerably more chassis performance it might be time to turn my attention to the most obvious area to upgrade: the engine's performance. I've managed to fend off the urge until now but there's only so long a man can go until he breaks. Plus it would be a shame to not exploit that new-found grip, wouldn't it?

Ryan Stewart



996 GT3

I pulled out last year's MoT certificate to check the renewal date and glanced at the recorded mileage on the sheet. Then glanced up at the tacho in the centre of that iconic cluster of five dials just behind the steering wheel. The difference between the two numbers didn't require the mathematical skills of Stephen Hawkings to calculate that in the last 12 months the car had covered just 80 miles! How embarrassing.

But the MoT was due, which also meant that my self-enforced annual servicing of the GT3 also needed to be arranged. And, of course, because two potentially hefty bills at the same time is never enough, the insurance was due also. Oh, and the road tax. Once you look at it in terms of pence, or rather pounds, per mile running costs it seems a most frivolous and excessive trinket to hold on to. But once balanced against the uplift in price that these cars have seen over the last 12 months it all starts to make a bit more sense. It's sad that it isn't being used as it should be but every time I open the garage door or fire up that amazing motor it brings a huge smile to my face. Parting with FAB would be a very painful experience. Hopefully prices continue to rise, at least enough to help me justify keeping it in what is slowly turning into an actual fleet! If it doesn't, I'll have to make the call on either letting it go or going back to using it and getting my money's worth from it.

Anyway, for now that's of little concern. This month it's all about a combination of damage limitation and praying nothing unforeseen pops up during the MoT and service.

Insurance first. Seeing as how the car is basically sat for most of the year (though I still can't bring myself to SORN it) I gave Manning a call to see what could be done to reduce the premium. First, we removed the wife. Not literally, just

figuratively. She's only driven the car twice in the last four years, and she has no idea where the car actually lives any more, so it's not like she's going to be driving it any time soon! That saved a hundred quid or so. Then we removed commuting and business use; another hundred pounds saved. Finally, and the hardest to swallow, was to admit that realistically the mileage the car was going to cover in the following 12 months was almost certainly not going to exceed a thousand miles…

Grand total? Just a fraction over £600 all in. A few hundred short of last year's premium, so I'm happy with that. Though in truth I could probably find it cheaper still if I swapped insurers and forgo the track day cover. But that would be admitting that FAB's days as a track car are over, and I'm not quite there yet. Oh sweet denial.

Next, servicing. It was a major service with plugs, filters, and a few other odds and sods. No issues during the service, carried out by Sports and Classic, and Mike checked the car over thoroughly prior to it going for its MoT. Everything looked in very good shape and Mike even commented that the engine looked exceptionally dry with no wetness, oil or coolant, visible anywhere. Apparently even the fabled Mezger engine is susceptible to a bit of weepage from time to time with some examples dropping quite a bit of oil from various points. So it's nice to hear that mine isn't suffering incontinence in its old age. And having had the rads and all the hoses replaced last year I'm hoping that the coolant side of the car is pretty well resolved now, too.

Next, the MoT. I don't often sit around and wait while they perform the test, normally preferring to have the car collected, tested and returned. But on this occasion the logistics just worked out better for me to drive the car to Bob Farnans in Knutsford and then sit there for half an hour and wait on the result. Bob Farnan has been MoT'ing FAB for a couple of years now. They have a great facility that is set up nicely for working on low entry vehicles like the GT3 with its ridiculous front splitter. Of course it's always a nervous time involving a lot of held breath waiting on the result. Last year FAB failed on the condition of the brake discs and pads and resulted in a hefty bill to get it through a retest. This year there was no such issue and it flew through the test with flying colours. Not even an advisory. Very happy with that. And exhale…

Finally, the Road Fund Licence. One of the few saving graces of having an old banger is cheaper road tax. Compared to more modern cars of similar performance and CO_2 emissions it's a bit of a bargain. Two hundred and something pounds lighter and not even a disc to stick in the front window these days. Just the right to use Her Majesties highways and byways for another year.

So with the annual jobs done, FAB was rolled back into the lockup, the cover draped over, followed by a big tarp. The roller shutters were dropped and that epic little motor packed away again until the next time the sun shines and I feel the urge to stretch its legs. I really should try and make that happen more often than I have during the past 12 months. I really should.

Jack Wood







924 S

It has been quite a remarkable month: not only have I changed jobs (after 15 years) but I finally finished my alloy wheel refurb! I think the latter was the more surprising, though.

Just to recap, I had stripped back a set of my teledials, applied filler primer and sanded them back. Then I painted them with generic Halfords silver wheel paint. Unhappy with the finish, the final two phases were repeated several times and at some point I had a track day and needed to get new tyres on so the wheels were set aside before being fully refurbished. And then the house took over. Some time passed and the seasons literally changed…

Of course, I should have just got on with the project when I had the chance. The problem that I had having moved into winter was the drop in temperature. I was skirting very close to what would have been the minimum working range of the aerosol paint. I was left studying the weather forecast looking out for the least chilly day. I dusted down my painted wheels and began lacquering. Not sure if there was anything special that I should be using on wheels I'd just bought a hard wearing PU lacquer. Application was easy enough.

Having applied a few coats of lacquer to either side of the wheels I left them over night to dry. Going back to check my work the following day I realised that the shed was a little dirtier than I'd thought and that and I hadn't cleaned off the wheels quite as well as I'd intended; every one appeared cloaked in cobwebs that showed up beautifully when covered in lacquer. That said the finish didn't appear to be too bad for it, once the wheels had been properly dusted off again. There were a couple spots where I had been a little over zealous with the aerosol and a small pool of lacquer had formed, but it did peel off quite easily. There were some





Matt has been swapping wheels around on the 924 in order to get the car looking shipshape



other patches where the coverage wasn't ideal. At some point I should be able to relacquer the slightly patchy bits. For the time being, though, they look good enough from a distance and (hopefully) on film as I had a great day up at Donnington the other week, driving in circles for an *XCAR* front engine Porsche feature. It was the filming deadline that prompted me into action after having had the wheels half-finished for many months.

Having got the wheels to an acceptable state, the challenge was getting them to the tyre changing place, and then explaining what I would need doing! The tyres on the painted wheels had to go in the bin. The tyres on the scruffy wheels had to go on the car on the painted wheels, and the loose winter tyres had to go on the scruffy wheels! An odd scenario but ultimately it meant I needed to get 12 tyres to the fitters, eight of them being on wheels. The four wheels on the car were no problem but I still needed to get eight tyres in the car. Okay, I needed to put one or two in the front passenger area but they all went in remarkably easily, a benefit of having stripped-out some of the interior trim.

The down side of having moved jobs was that my new office was nowhere near a tyre fitter, so I had to take them into Oxford one Sunday. I realised I was going to get slightly fleeced for swapping a few tyres around but I didn't appreciate that there would be a problem getting the work done in the first place. Having had a look online I found a National Tyres on the main road into town; given it was a Sunday I wasn't fussy where I'd get them done. When I explained to the chap in reception what I needed doing, which took a little time, he informed me that it was company policy not to fit tyres that they are not supplying as they do not know the condition of them. I can understand not wanting to fit tyres that are too old, as they perish, or of marginal tread depth, but both of these things are identifiable from the tyre. Not everyone agrees with me on this, which is fair enough. The interesting point was that I asked if I had bought winter tyres from them, swapped them out in summer for new tyres would they swap them back come winter? No. So I will certainly be checking the policy with any outlets before I buy anything in future. I checked online and there was a Formula One Autocentre a little way down the road. I took the car there and explained what I needed doing. The chap made a note to ensure everything ended up where it should and asked me to give them a couple hours to get the car in and the job done. It actually worked out well as the garage was close to the town centre and allowed me to do some shopping while they worked. Walking back to the car the wheels actually looked rather good, if not the original silver.

Having read this report, you may be thinking (rightly) that this all sounded like a bit of a botch job. At some point I will get the other set of wheels refurbed properly and keep this set for winter duties – something I should have done originally. For now, though, I just need to find a set of centre caps that aren't disproportionally expensive, so that I can respray them the same colour as the wheels. Let's see what else I can find while I am looking… ooh, a spare engine!

Matt Biggs

1981 911 SC

As the weather has worsened the SC has seen less and less drive time, and that's not just down to the track tyres in the wet but dealing with the condensation, too. Where some of you are thinking I should just hitch up my dress and get on with it, I am sure there are an equal number with old 911s SORN'd for the winter, wincing at the very thought of taking the car out in this weather. And as my new commute sees me spending a reasonable amount of time crawling along, which gives me time to enjoy the noise of the slightly clattery engine at tickover and also leaves me having to negotiate the cold gearbox in the stop/start traffic, that takes the edge off the moral superiority.

I do like that the SC adds a splash of '80s colour to an otherwise largely grey and black car park. Ultimately, though, the car is simply too good and too much of an experience to not drive. Besides I am a great believer in using cars regularly as a form of preventative maintenance, so I try and get out at least once every couple of weeks.

With the lights, though, I have been spoiled with the Boxster which has xenons. They are truly excellent and easily outperform the older cars' lights on full beam. It's not just me that thinks so; on many occasion oncoming drivers give me a quick flash of appreciation for lighting up the night skies. Well, that's how I see it anyway. It is not surprising that on a number of occasions I have got in the SC, and the 924 S for that matter, and thought I've blown one of the main lights only to discover they're both working perfectly. It was of no great concern, then, that when I left work the other day, in the SC, that all was not light in the world. I assumed that the way ahead was just not as well-lit as it would be in the Boxster but there was nothing amiss. It took a queue of traffic to reveal that one of the headlights was not working. I could see on the back of the car in front that there was very little light being generated on the driver's side. With the changes in temperature at this time of year it is not uncommon for bulbs to fail. Bucking what appears to be the current trend of letting headlights fail and just adding the fog lights to what remains working, I garaged the SC until such a time as I could buy a new bulb.

To replace a bulb in the SC you need to remove the headlamp unit from the outside and then it's easy to take out the bulbs. The up side of this process is there is far less contortion and faffing about than changing lights on a modern car. The down side, well, the instructions were slightly ambiguous and I managed to get the wrong screw and turn the beam adjuster by mistake. I did suspect that this might happen so I counted the number of turns to ensure that I could undo what I'd done, if/when I was that stupid. I know there are markings on the bulbs that identify the type but I generally find it easier to take the old one with me and make sure I buy the right one. I took the 924 S to get some tyres swapped around and picked up a couple of spare bulbs from the same place.

When home I fitted the





replacement bulb, reseated the headlamp and flicked the switch. Nothing. Damn it. That meant a wiring problem somewhere. I didn't have a lot of time to start chasing through the problem so the car was left. A few days later I needed to move the SC, the lights worked, both of them. If there is one thing that I really cannot stand, aside from mismatched nut and bolt sizes, it's intermittent faults. I will run the car and keep a close eye on the lights. I need the lamp to fail again to trace the fault. Hopefully it's nothing more than a poor contact somewhere and will be easy to find.

As I mentioned, the other problem I have with the SC is the condensation, which is never too bad when the car has been garaged, so an outward journey is fine but the return, where the car has been outside all day, often leaves the windscreen needing a good towelling down before I start and then when I am moving, too. The key is to go fast enough for the cold air flow into the cabin to clear the screen. The most frustrating part of it all is my own behaviour, for while I accept that the heater system would have been of little use even when new, let alone now, I cannot help but tinker with the controls in the hope that it will, somehow, magically spring into life. Of course it never happens and will remain one of my longer term projects. For the time being I will be Charlie Brown and the heater controls Lucy holding the football, instilling in me that false hope that this time it is going to be different, this time I will get the heat I so badly need.

Matt Biggs





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993 Carrera and Carrera 4

Standard 993 values have soared in the last couple of years, and show every sign of holding firm.

'There are still sub-£20,000 993s out there, and these tend to be private sales of early cars, with higher mileages and, sometimes, Tiptronic transmission. I usually tell people to budget at least £22,000 for a 993, which will get them a well-sorted early example with around 90,000 miles on the clock.'

I bet that got your attention. However, before you get all excited, let me explain. Those words were written in 2013, the last time I looked at Porsche 993 values. Today, you'll have to add at least £10,000 to the figures above, as values have shot up in the last couple of years. Great news if you own a 993, less good if you aspire to owning one.

The thing about the 993 is that it's always been an incredibly popular 911. People just love its curvaceous lines and constantly point out that it's the last and the best of the air-cooled 911s. Is that such a good thing? Well, yes, actually. Porsche gradually developed the 911 for 30-odd years and, by the time the 993 came along, they had pretty much got it right.

The 3.6-litre engine was well sorted and, for the first time, benefited from hydraulic tappets which reduced servicing costs. An all-new multi-link rear suspension system improved the ride and handling, and reduced road noise, while a simple form of traction control was included in the package.

The 993 has proved to be a tough, reliable and enjoyable 911 to own, yet still retains the classic 911 interior (albeit smoothed out in some places) and driving experience, a rock-solid build quality and, of course, that beloved air-cooled engine. No wonder it's so popular.

Furthermore, most 993s have been owned by reasonably well-heeled enthusiasts and, therefore, been well looked after and kept in original condition. It's rare to find a neglected or modified example. That said, they are getting old now so don't be lulled into a false sense of security. Rusty rear chassis members, worn suspension joints, leaky engines and tired interiors are all becoming increasingly common as the 993 eases into middle age.

So what if you want a 993 and your budget is tight? Well, look for a combination of the three least popular attributes – Cabriolet body, Tiptronic transmission, and high mileage. Air-cooled 911 Cabriolets are out of favour with buyers across the board (oddly, it's the opposite with the later water-cooled rag-tops) and, in the case of the 993, many are also automatics. I personally don't have a problem with the Tiptronic 993; okay, it's not the most involving 'box but it does make sense in modern traffic, but in general people want a manual.

That leaves mileage. I've long

The 993 has proved to be a tough, reliable and enjoyable 911 to own, yet still retains the classic 911 driving experience





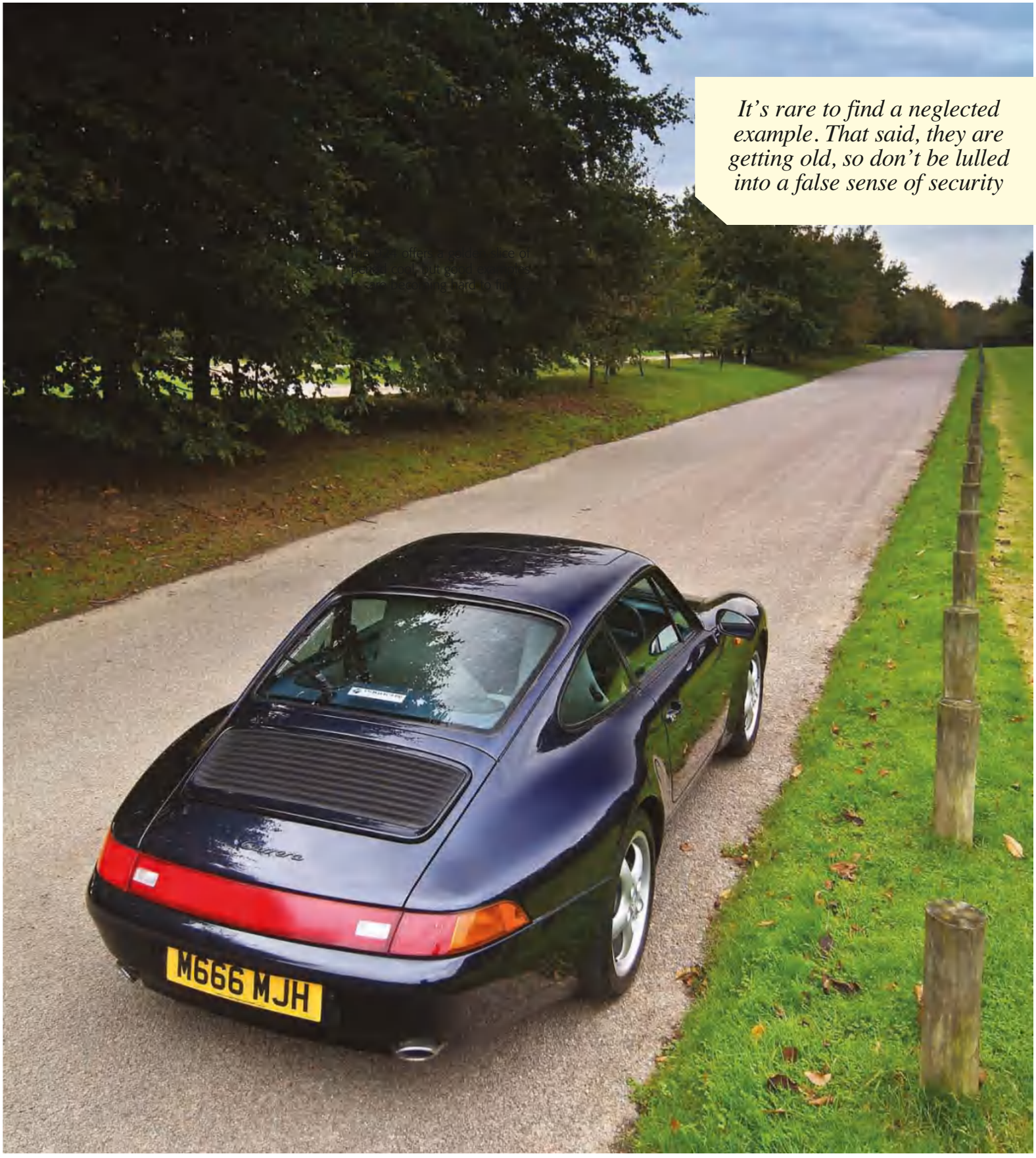
noticed that 993 buyers, probably more than for any other 911, will pay a premium for low mileage cars and shy away from anything over, say, 80,000 miles. Which is silly when you consider how tough these last of the air-cooled 911s are and realise that their engines just keep going way beyond 100,000 miles without needing any major attention.

If you can cope with a 90,000-mile automatic 993 Cabriolet, then you should be able to find a reasonable example for as little as £33,000. That would have been a tad over £20,000 three or four years ago.

But what if you demand a manual-transmission coupé with fewer miles? Increasingly, you're going to need a budget of around £45,000 which will get you into a nice example with 60,000-plus miles on the clock. If that is still too many miles (and it shouldn't be), then add at least another £10,000 to your budget for a rare sub-50,000 mile car. I found a 25,000-mile, one-owner car for £65,955 but, oh, it's a Tiptronic…

A few years ago, any 993 buyers' guide would tell you to opt for the later Varioram engine. This included clever induction technology that altered the length of the inlet pipe as engine revs increased, thus ensuring volumetric efficiency. The upshot was more mid-range grunt and an increase in overall power from 272hp to 285hp. Useful but, in reality, there is nothing wrong with the original engine and, in fact, it's more free-revving. Today, people have realised this and there's no difference in value between Varioram and non-Varioram 993s – they are priced according to their





It's rare to find a neglected example. That said, they are getting old, so don't be lulled into a false sense of security

condition, mileage and history.

As we reach the end of 2015, it seems that 993 values have settled down a bit after a hectic year. However, they remain incredibly popular cars that fly off the shelves as soon as they go on the market. For such a useable and sought-after classic, they remain undervalued and I can see them continuing to steadily go up in price in the future.

The key, though, will be to ensure you buy a good one. As I mentioned, as 993s get older, they are requiring extra work to keep them in tip-top condition. So if you own one, don't skimp on maintenance if you want to protect your investment. If you're buying, look for a well-documented service history and check the car over very carefully.

Who knows, the next time I write about 993s, I may be reminiscing about the time you could pick one up for under £40,000… ○



For such a sought-after classic, they remain undervalued and I can see them going up in price in the future




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Emissions

Jesse Crosse gets to the bottom of a rather hot topic at present: emissions.

Emissions – the driest of dry subjects. Unless there's a scandal involved that is, then it suddenly becomes interesting. The Volkswagen Group, of which Porsche is a part, has been plunged into the darkest period of the company's history by revelations that it installed a 'defeat device', software code inserted in some diesel engine ECUs. The software would monitor the engine's activity and if it detected an emissions test was in progress, would switch to a more favourable emissions regime to reduce oxides of nitrogen (NOx). The fiddle was revealed after the US Environmental Protection Agency (EPA) commissioned some real-world testing on various cars, eventually forcing Volkswagen to confess the presence of the defeat device.

This meant that other brands within the group using four-cylinder diesels could potentially be affected but initially Porsche was in the clear. Then in November, the EPA's finger was pointed at the Group's 3.0 TDI engine, the EPA alleging that it too was running the NOx defeat device, something denied by Volkswagen. Shortly afterwards, Porsche US responded by withdrawing the Cayenne from sale until the matter had been cleared up, saying it understood its engines complied with the regulations. At the time of writing, that is still Porsche's position. To add to the controversy, Volkswagen has also admitted that 800,000 cars powered by smaller three and four cylinder diesels were affected by 'irregularities' when certifying CO_2 levels.

Car exhaust emissions fall into two main groups. The first is for the toxic emissions of NOx, unburned hydrocarbons (HC), carbon monoxide (CO), and particulate matter (PM). The second is for CO_2 which is non-toxic but makes a mess of the atmosphere if there's too much of it. First, the toxic emissions. These have been regulated for in the US since the 1970s and in Europe, since the 1980s. The three-way catalytic converter was invented to take care of NOx, CO and HC in petrol engines and much later in the 1990s, the diesel particulate filter was developed to trap particulates, reducing tailpipe emissions of them to virtually zero. A diesel engine runs lean compared to a petrol engine (more oxygen, less fuel) something the chemistry of a three-way catalytic converter is not suited to. Instead, a diesel uses oxidation catalysts to deal with CO and HC, 'lean NOx traps' to convert NOx into harmless gases. The latest NOx-beating technology is selective catalyst reduction (SCR), designed to deal with the latest regulations like EU6.

The challenge for powertrain engineers is this: NOx has to be reduced in two stages – during combustion, then by catalysts. It's not feasible to just fit a killer exhaust emissions system to deal with the filthy engine-out emissions.

A key method for reducing NOx during combustion is exhaust gas recirculation (EGR), the substitution of exhaust for fresh air when cruising around at part throttle, but here's the rub. EGR generates more particulates, which fill diesel particulate filters faster, triggering more regeneration events, consuming more fuel and generating more CO_2, so engine calibration is a huge balancing act.

The most likely reason for the NOx transgression is that the Volkswagen Group calibration teams found the exhaust emissions hardware they'd been given was inadequate to meet the stringent US regulations and that no amount of software calibration work could compensate for that inadequacy.

Predicting what hardware will be needed to meet future emissions regulations is difficult and based on estimates of what improvements need to be made to existing equipment. The accuracy of that depends to some extent how those estimates are arrived at and if the needs are underestimated, the problems start. Fitting bigger filters or catalysts once a car is signed off for production would involve astronomical cost and may be physically impossible to fit in the space available. So someone took the





The Cayenne's 3.0 TDI engine may emit nine times more NOx than the regulations allow, Porsche has paused sales of it in the USA…

decision to commission the defeat device software for the engine ECUs.

Neither Porsche, nor the 3.0 diesel engine it uses, are in the frame for having CO_2 figures 'fixed' but looking at the wider picture, how does the control of CO_2 come into the equation? Volkswagen engineers have allegedly admitted tricks used to reduce fuel consumption and CO_2 on the affected cars include thinning engine oil with diesel fuel and increasing tyre pressures. So which is the greater misdemeanour, knowingly engineering vehicles to exceed the NOx limits, or falsifying fuel consumption tests, thus hitting your customers in the pocket?

One way of answering that is to ask another question: when is it cheating and when is it optimisation? For most people, creating and installing software to deliberately cheat the system is a premeditated act. But how serious is the alleged inaccuracy of the CO_2 certification by blowing the tyres up? Perhaps not as serious, but still serious. Increased CO_2 is likely to have a more direct effect on the customer because if CO_2 goes up, so does fuel consumption. It's also true that emissions and fuel consumption certification serves as a benchmark, a way of comparing one vehicle with another. Cheating on CO_2 emissions gives an unfair competitive advantage and influences the brand a customer chooses.

Ultimately, the NOx fiddle is arguably more serious because NOx is toxic. In alleged 'cheat' mode the 3.0 TDI is said to emit nine times more NOx than the regulations allow, more than the earliest regulation's maximum limits for NOx of 15 years ago. Even without cheating, vehicles are engineered to perform as best as they can in a fixed test cycle and that is what the manufacturers are required to do. That the tests may bear little relation to the real world (and they don't) is beyond the control of the manufacturers. Real world emissions of NOx will always depend on who is driving, how they are driving and the prevailing conditions. Even without cheating, they may well exceed the test cycle value significantly.

The New European Driving Cycle (NEDC) is due to be replaced by the WLTP (Worldwide harmonised Light vehicles Test Procedures) and hopefully that will help. In the meantime we are left pondering which is worse: the falsifying of test figures or the tests themselves ○

Jesse Crosse



Geometry: Part One

Jesse Crosse gets to grip with the dark art of setting up a car's geometry…

Suspension geometry is something most drivers think little about beyond having the front wheels aligned from time to time. In family cars, wheel alignment is usually the only aspect of the geometry which can be adjusted and beyond a fairly major shunt or seriously whacking the suspension on a kerb, the angles should remain more or less where the manufacturer originally intended.

That's not the case with Porsche sports cars which are adjustable, so if age or other factors take their toll on the all-important ride heights or 'geo', they can usually be adjusted with the right equipment and know-how. If you like maintaining your own car and have a smooth, flat workshop floor, there's no reason why you can't have a crack at setting the geometry yourself.

If you're planning suspension modifications like uprating dampers or springs, fitting polybushes, fitting 'harder' brake pads or any of the above, it's doubly important to get the geometry right as it can have a profound effect on how the car steers, handles and even brakes. Fitting new or uprated suspension parts is pointless if the wheels are not pointing in the right direction.

Starting at the front, 'geometry' effectively means wheel alignment (toe), castor and camber. Toe is the angle between the front wheels and camber is the angle of lean of the wheels. Are they leaning in at the top (negative camber) or outwards at the top (positive camber)? Depending on the vehicle dynamics of a particular car, it may have positive, negative or zero camber on the front wheels in particular. Negative camber is used to keep the contact patch of the outside tyre as flat on the road as possible during hard cornering, compensating for the tendency of the outside wheels to lean outwards when cornering. It's common to see more of it on the front of front-engined, rear-wheel drive cars to prevent understeer.

Front-wheel drive hot-hatches sometimes have pronounced negative camber at the rear to reduce the risk of lift-off oversteer. Road-going rear engined cars with a high moment of inertia typically have less, or no negative camber to compensate for the natural tendency of the car to oversteer during cornering. The front wheels of all 911s from the earliest until the mid-1980s are all set to zero degrees camber. For competition, drivers may use negative camber on both the front and the rear. It's all a question of balance.

Castor refers to the angle between the line about which the road wheels swivel and the vertical. In the case of a 911 with MacPherson-type struts, castor literally refers to the vertical angle of the strut when looking from the side. Inclining the strut rearwards at the top increases castor. On a 993, castor is adjusted by an eccentric bolt on the lower wishbone, so while the mechanism of adjustment varies from car to car, the principal is the same.

Castor is important for two reasons. It creates steering feel and also 'dynamic camber.' When the front wheels steer, the outer wheel moves around the front of the strut. As the strut is inclined rearwards at the top, negative camber increases on the outside wheel as the car corners, increasing grip. Again, there's a fine balance between castor and camber on the front suspension. Adjusting ride height, camber and castor will affect toe so this should be set last.

The simple way to get your geometry checked is to trot along to a local specialist equipped with a laser rig. These are computer-based and will tell the operator exactly what the geometry is at each wheel, how the rear wheels are aligning with the front and from that, they can see what needs adjusting to restore alignment. A good system will have the factory values for the car stored and can give you a printout showing what the deviations are.

If you use your car for track days or competition and want to experiment with settings, then it's handy to be able to set up the geometry yourself. You can buy gauges for camber, castor and wheel alignment but for wheel alignment, a simpler method is to use two lengths of string as recommended by numerous WRC and Touring Car race teams. Alternatively, you can buy simple gauges to measure wheel alignment for around £70. Classic Dunlop wheel alignment gauges will cost more, around £250 a set second hand or £475 new. Similar, cheaper alternatives will set you back around £200 new. Camber and caster gauges cost from around £30 upwards.

So once armed with all these exotic sounding instruments, what do you do with them? Tune in next month to find out… ○



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Where from? www.tamiya.com
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How much? £1280
Where from? www.regalautosport.com
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How much? £2587.50
Where from? www.design911.com
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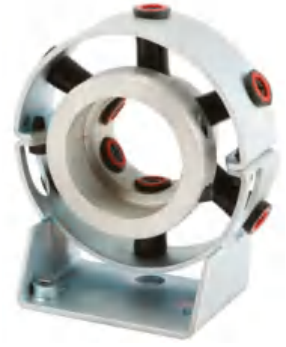
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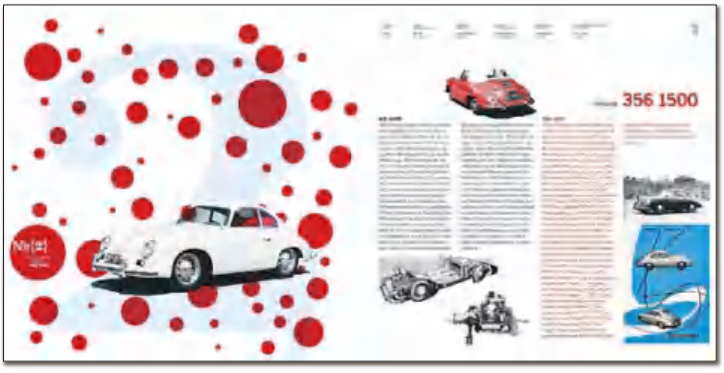




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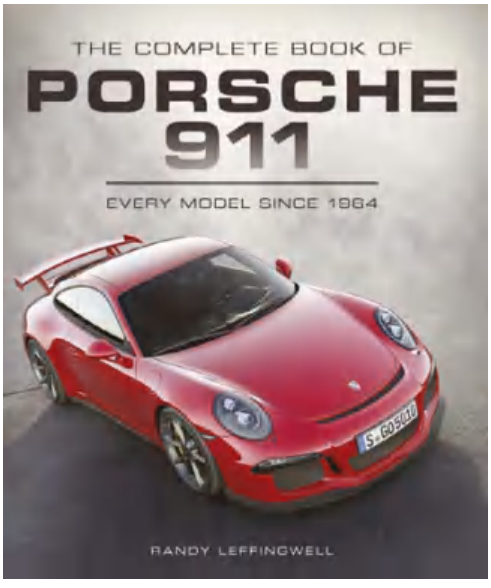
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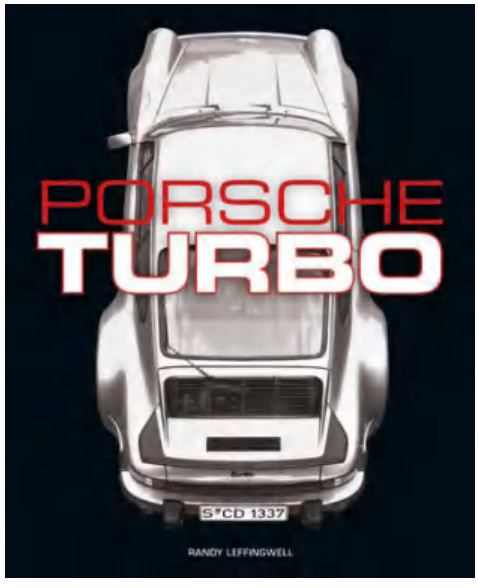
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How much? £35
Where from? www.quartoknows.com
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PORSCHE TURBO BOOK



How much? £45
Where from? www.quartoknows.com
Entitled *Porsche Turbo: The Inside Story of Stuttgart's Turbocharged Road and Race Cars*, this hardback book celebrates the life and times of Porsche's turbocharged cars. Author and photographer, Randy Leffingwell, works from the 917 through to the 930 Turbo, right through to the 918 Spyder and Panameras of the present day, analysing each one in detail as he goes. With lovely period images, this is another Leffingwell book we'd reserve a place on our shelf for in a heartbeat. ISBN: 9780760347584.

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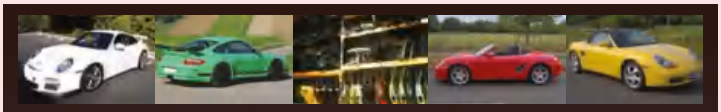
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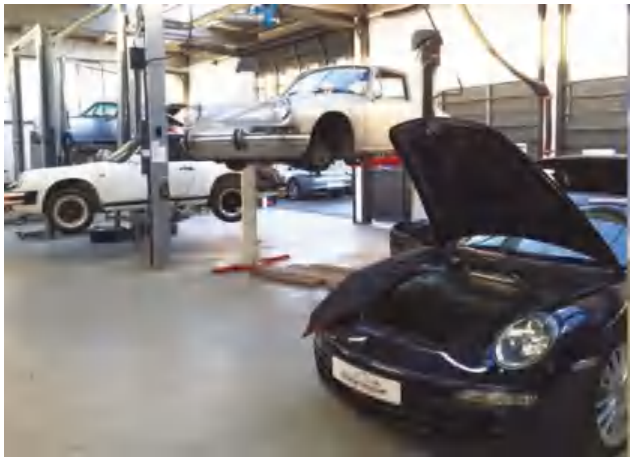
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GMÜND COUPÉ/356: 1948 – 1964

Two-door, two+two Coupé, Roadster, Speedster. Rear-mounted four-cylinder air-cooled 'boxer' engine.

This is where the Porsche story begins. After the aluminium prototypes and numerous projects for Volkswagen, Dr Porsche gave the go-ahead for his company to relocate from the converted shed in Gmünd to a rented workshop in Stuttgart (owned, incidentally, by Reutter, the coachbuilder responsible for building the 356 body for Porsche). At the 1949 Geneva Auto Salon Porsche displayed a 356 for the first time, with a coupé and drophead model taking the limelight. A makeshift production line was started in the same year.

The following year the 356 was shown to a meeting of Volkswagen main dealers as well as European and overseas importers who promptly placed orders for 37 cars. The first Stuttgart-built 356 rolled off the production line in Easter 1950.

The 500th Porsche was built on 21 March 1961, with the 1000th model arriving just six months later, and when the last 356 was built in 1964 – a 356C convertible – a total of 76,302 examples had been built.

The arrival of the 356 also signalled Porsche's first forays into motorsport. Dr Porsche's cousin, Herbert Kaes, is thought to be the first to compete in a Porsche car when he took an early 356 and entered it in a race around the streets of Innsbruck, Austria on 11 July, 1948. Kaes and the Porsche won their class, obviously. The first recognised 'factory' victory came in 1951 in the 24 Heures du Mans (where else!) when Porsche's French importer, Auguste Veuillet, convinced Dr Porsche that by entering a car into the twice-round the clock race it would result in a big boost in sales and Porsche's global awareness. Veuillet, along with his co-driver Edmund Mouche, won their class in the 1100cc 356. The rest, as they say, is history.

Today the 356 enjoys the status of a genuine classic car. Collectors and enthusiasts alike have seen that the majority of examples have been meticulously restored and maintained and this is reflected in the values they are reaching on the classic car market. Demand for all models and variants is high with the Carrera models some of the most sought after.



356

Dimensions: *Wheelbase (mm): 2100 – Length (mm): between 3850 (1950) and 4010 (1959). Width (mm): 1660*

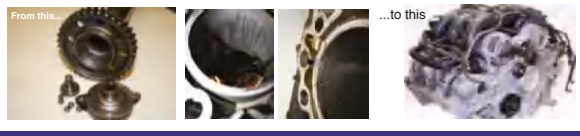
1948 to 1949: *Gmünd Coupés:– the 356's predecessor was first produced in July 1948. The aluminium-bodied Gmünd Coupés used virtually all VW mechanicals from a four-speed gearbox to torsion bar suspension, and, of course, the Beetle-derived 40hp flat-four engine complete with twin Solex down-draught carburettors and 7.0:1 compression ratio. Drum brakes were fitted all-round.*

1950: *'Pre-A' 356:– Following the move to Stuttgart, the 356's integral body was made of steel and the design given a higher waistline than Gmünd Coupés, with the distinctive V-shaped roof to accommodate its split-screen. The 1.1-litre engine now produced 40hp and, along with the other engines offered after 1952, was mated with Porsche's own four-speed gearbox.* ***1951:*** *1300cc and 1500cc (60hp) engines introduced.* ***1952:*** *Split-screen front windscreen replaced with single piece window; bumpers mounted higher and further forward from body; rectangular rear taillights replaced with circular items. 1500cc engine loses 5hp but is more refined and was the first engine to feature the 'Alfinger' crankshaft. 1500 S (70hp) engine introduced. Fully synchronised gearbox fitted across the range.* ***1955:*** *356A:– New engines and suspension altered. New curved 'V-screen' does away with the need to split the screen, vinyl replaces cloth inside. New dash, combined ignition/starter. New gearbox in 1957. Four Cam Carreras launched at the 1955 Frankfurt Motor Show, these engines were directly derived from racing technology, with GT-denoted models aimed specifically at motorsport. They were dry sumped, had reduced compression ratios and revved much higher. The bodies around them were lightweight, making them very potent on the road for their day.* ***1959:*** *356B:– 90hp 1600 introduced for Super 90 which gets 'compensating rear springs' to improve handling. Changes to bumper position, headlamps and numerous interior details.* ***1961:*** *Larger rear window and engine cover with twin air intakes introduced, electric sliding roof optional; 1600 S engine gets four-ring pistons, S-90 gets modified flywheel. 130hp Carrera 2 announced (introduced in 1962), featuring Porsche-designed disc brakes.* ***1963:*** *356C:– Reworked engines, clutch from Super fitted to 75 and 95hp models, disc brakes introduced all-round, rear compensating spring special order only, no external changes but there was a rethink of the interior details.* ***1964:*** *Porsche takes control of Reutter and 356 C introduced, Roadster dropped from the line-up.*

MODEL	MODEL YEAR	WEIGHT	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Gmünd Coupés	1948 to '50	605	1086	35-40	50	23.0	80
'Pre-A' 356							
1100	1950 to '54	745	1086	40	51	23.5	87
1300	1951 to '54	810	1286	44	59	22.0	90
1300A	1954	830	1286	44	51	22.0	90
1300S	1953 to '54	830	1290	60	64	17.0	99
1500	1951 to '52	830	1488	60	75	15.5	105
1500	1953 to '55	830	1488	55	77	16.5	96
1500S	1952 to '55	830	1488	70	80	13.5	108
356A							
1300	1955 to '57	860	1290	44	60	22.0	90
1300S	1955 to '57	900	1290	60	65	17.0	99
1500GS Carrera	1955 to '58	835	1498	100	88	12.0	124
1600	1955 to '59	835	1582	60	81	16.5	99
1600S	1955 to '59	835	1582	75	86	14.5	108
1600GS Carrera	1958 to '59	835	1587	105	89	11.0	124
356B							
1600	1959 to '63	905	1582	60	81	16.5	96
1600S	1959 to '62	925	1582	75	86	15.0	108
1600S	1960 to '63	925	1582	90	89	13.5	112
1600S	1961 to '63	935	1582	75	86	15.0	108
1600GS Carrera GT	1959 to '61	890	1588	115	99	10.5	124
Carrera 2	1962 to '64	890	1966	155	144	9.0	124
356C							
1600C	1963 to '65	935	1582	75	89	14	109
1600SC	1963 to '65	935	1582	95	90	13	116
2000GS	1962 to '64	935	1966	130	119	9.0	124

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911 (1964 – 1989)

(Zero) 0-Series – 1963 to 1966: *'64 to '66 Model Year – Wheelbase (mm): 2211 Length/Width (mm): 4163/1610 –* ***Significant developments:*** *911 (very briefly 901) first shown at 1963 Frankfurt Motorshow, went on sale in 1964 with six-cylinder 2.0-litre engine. Targa announced in 1965 and goes on sale 12 months later. Weighs 50 kilos more than coupé*

MODEL	MODEL YEAR	WEIGHT(kg)	ENGINE (cc)	Hp	TORQUE (lb ft)	0-60*	MPH
901	1963	1080	1991	130	119	8.5*	131
911	1964	1040	1991	130	120	8.3*	130
911	1965 to '67	1080	1991	130	128	8.3*	130

A-Series – 1966 to 1968: *1967 Model Year –* ***Significant developments:*** *160hp 911S introduced, as are 5.5-in tyres. 911L had vented discs taken from 911S. Four-speed Sportmatic introduced in 1967. All models available as Targa, glass window replaces plastic item from 1968.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911L	1353/1321	1075	1991	130	130	10.6*	131
911T	1353/1321	1080	1991	110	116	8.3	124
911	1353/1321	1080	1991	130	128	9.1	130
911S	1353/1321	1080	1991	160	132	8.0*	137

A-Series – 1967 to 1969: *1968/69 Model Year –* ***Significant developments:*** *Wheelbase extended by 57mm to enhance handling, single battery replaced with twin 35amp alternatives in front luggage compartment to keep front end more securely planted and enhance handling. S and E both have mechanical Bosch fuel injection, 911T introduced, 'E' model replaces 'L'.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911T	1353/1321	1075	1991	110	115	8.3	124
911E	1353/1321	1020	1991	140	129	8.4	134
911S	1353/1321	995	1991	170	135	8.0*	137

C-Series – 1969 to 1970: *1970 Model Year –* ***Significant developments:*** *Increase in bore from 80 to 84mm raises engine capacity to 2.2-litres. Aluminium crankcase replaces magnesium alloy item. 225mm clutch introduced. Sportmatic no longer an option on 911S. Front upper strut attachment points moved forward 14mm.*

D-Series – 1970 to 1971: *1971 Model Year –* ***Significant developments:*** *PVC-coated, galvanised underfloor areas introduced. Tweaks to injection and ignition required to meet new European emission laws.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911T	1362/1343	1020	2195	125	131	9.5	127
911E	1372/1354	1020	2195	155	141	7.6*	137
911S	1372/1354	1020	2195	180	147	7.0	138

E-Series – 1971 to 1972: *1972 Model Year –* ***Significant developments:*** *Engine stroke increased to 70.4mm giving 2.4-litre capacity. Compression ratio dropped to allow use of regular petrol. Gearbox uprated to cope with increased torque. External oil filler cap located between door and rear wheel. All models supplied with Fuchs wheels.*

F-Series – 1972 to 1973: *1973 Model Year – Wheelbase (mm): 2271 Length/Width (mm): 4127 (RS 4147)/1610 –* ***Significant developments:*** *External oil filler removed due to customer confusion at the petrol pumps. Chin spoiler introduced on S to reduce front end lift (option on T and E) and greater variance in standard wheels. 2.7 Carrera RS is first to be fitted with duck-tail rear wing.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911T	1360/1342	1050	2341	130	144	8.1	127
911E	1372/1354	1050	2341	165	151	7.9	138
911S	1372/1354	1050	2341	190	158	6.6	144
Carrera RS	1372/1394	975	2687	210	188	5.8	152

G-Series – 1973 to 1974: *1974 Model Year – Wheelbase (mm): 2271 Length/Width (mm): 4291/1610 (Carrera 1652) –* ***Significant developments:*** *Shock absorbing bumpers introduced as a result of US legislation. Range-topping Carrera model came with 'black look' trim and 210hp.*

H-Series – 1974 to 1975: *1975 Model Year –* ***Significant developments:*** *Turbo introduced early '75 with four-speed gearbox and higher spec. Duck-tail replaced by whale-tail on Carrera models. Silver Anniversary model launched, 1063 sold.*

MODEL:	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911	1360/1342	1075	2687	150	173	7.9*	131
911 S	1360/1342	1075	2687	175	188	6.1*	142
911 Carrera	1372/1354	1120	2687	210	188	6.3	150



911: 1963 – 1989

Two-door, two+two Coupé, Convertible and Targa. Rear-mounted six-cylinder air-cooled 'boxer' engine, four- and five-speed manual and four-speed Sportmatic gearbox.

For some a real 911 is an air-cooled 911, and some of the greatest examples are from this period. Two of the most iconic 911s ever produced – the 2.7 Carrera RS and 3.0 Turbo – arrived on the scene during this time and Porsche also gave us the sublime 1970 2.2 S. Bosch K-Jetronic fuel injection was introduced (1976) and the first 911 Cabriolets (1983) arrived in showrooms. The 3.2 Carrera fed the Yuppie boom (1983) and the Carrera Club Sport (1988) was the first lightweight 911 special since the original Carrera RS some 15 years earlier.

On its arrival the original 911, or 901 as Porsche had first intended calling it until the French manufacturer Peugeot pointed out that they owned the trademark to model designations with an '0' in the middle, was a huge leap forward from the company's original four-cylinder 356. With its 2.0-litre flat-six, five-speed gearbox, independent suspension and disc brakes the new 2+2 sports car was quickly snapped up when it first appeared at the 1963 Frankfurt Motor Show.

A seemingly continuous development programme saw the 911 evolve at a pace. The Targa model was launched in 1965 in anticipation of US legislation that would ban fully convertible cars (it never happened, but the Targa proved a popular choice with its distinctive brushed stainless steel rollover hoop and zip-out plastic rear window). More power (160hp) and larger wheels (5.5-inches) arrived 12 months later, as did ventilated discs and a four-speed Sportmatic gearbox. The Targa's plastic rear window was replaced with a more conventional glass item in 1968.

The start of the next decade saw the flat-six's capacity grow to 2.2-litres and gave us the sublime 2.2 S and a chunky 180hp (190hp in 1973). Measures were also taken to prolong the life of the 911 with PVC and galvanised floors both introduced, and the legendary Fuchs wheels became available across the range.

1973 was the year every 911 aficionado has indelibly inked on their mind: the 2.7 Carrera RS arrived. 975 kilos, 210hp, aluminium bodywork, lightweight glass and the infamous duck-tail spoiler signified the most focused, driver-orientated production 911 to date. Rarer R and S/T racing models had come and gone, but this was the first performance-orientated 911 road car to be sold through the dealer network. A legend was born.

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Not content with blowing the minds of its faithful customers with its first RS road car, Porsche unveiled its concept for a new, more powerful, luxury-orientated version of the 911 at the 1974 Paris Motor Show – the 911 Turbo.

With a 3.0-litre flat-six motor and a single KKK turbocharger the new model produced 260hp delivered to the rear wheels via a four-speed manual gearbox. With a 0-62mph time of just 5.5 seconds and a 155mph maximum speed it was the fastest, most powerful Porsche road car to date, and its arrival coincided with the oil crisis.

With its flared rear-wheel arches, deeper front and whale-tail rear spoiler it was far from subtle, but Porsche's customers loved it and nearly 3000 were built. In 1978 it gained a bigger, 3.3-litre engine and more power (now 300hp), could crack 160mph and would continue in production until 1989.

Porsche also offered as a 911 Turbo Cabriolet and Targa model from 1987-88, as well as the 330hp 'slant-nose' coupé from 1983 through to 1989. And if you wanted the show without the go you could order Turbo-look Coupés, Cabriolets, Targas and Speedsters. Has there ever been a more blatant example of the excesses of the '80s?



During the 1980s Porsche hit upon a winning formula for its rear-engined sports cars, despite the best attempts by various management boards to try and kill it off.

As engine capacity rose from 2.2-, through 2.4-, 2.7-, 3.0- and finally 3.2-litres, so did the power and performance of the numerous models and variants introduced. The first 911 Cabriolet arrived on the scene in 1983, and before this a whole of host models had come and gone: the 2.4S became the Carrera in 1974 with 2.7-litres and 210hp, and the 3.0 Carrera in '76 with 200hp (US emissions laws had strangled the flat-six a bit). The 3.0 SC arrived in 1978 with a feeble 180hp but redeemed itself in 1981 with the new 3.0 SC arriving with 204hp.

In 1984 Porsche delivered its latest 911: the 3.2 Carrera. With 231hp, a 6.1 second 0-62mph and a 151mph maximum speed the 911 was back on track. In 1987 the somewhat wayward 915 transmission was replaced with a slick Getrag G50 'box and this generation 911 saw out its final years able to hold its head high and compete with the more youthful opposition.

930 Turbo	1432/1500	1140	2993	260	253	6.0*	155

I-Series – 1975 to 1976: *1976MY – **Significant developments:** Bodies now zinc-coated, galvanised steel. Bosch K-Jetronic fitted to all models. Sportmatic now only three-speed, not four.*

J-Series – 1976 to 1977: *1977MY – Wheelbase (mm): 2271, Length/Width (mm): 4291 (Turbo 4318)/1610 (Carrera 3.0 1652, Turbo 1829) – **Significant developments:** Sportmatic cars get brake servo assistance. 'Black-look' trim standard on Targas.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911	1360/1342	1120	2687	165	176	7.8	135
Carrera 3.0	1372/1354	1075	2994	200	188	6.3	150
930 Turbo	1432/1500	1195	2993	260	253	6.0*	155

K and L-Series (the SC) – 1977 to 1979: *'78 to '79MY – **Significant developments:** Super Carrera combined old 911 and Carrera with 3.0-litre engine, all had servo-assisted brakes. Turbo 3.3-litre engine equipped with intercooler and tea-tray spoiler replaces whale-tail. **SC (New A-Series) – 1979 to 1980:** 1980MY – **Significant developments:** Revised ignition and camshaft timing results in 188hp SC model. Turbo gets twin-exit exhaust.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911 SC	1369/1379	1210	2994	188	188	7.0	141
930 Turbo	1432/1500	1300	3299	300	304	5.1*	162

SC (New B-Series) – 1980 to 1981: *1981MY – **Significant developments:** First year of 17-digit international chassis number. SC now runs on 98RON fuel. **SC (New C-Series) – 1981 to 1982:** 1982MY – **Significant developments:** Limited edition 'Ferry Porsche' model goes on sale. Tea-tray spoiler option available for SC. **SC (New D-Series) – 1982 to 1983:** 1983MY – **Significant developments:** Cabrio rushed into production and launched following successful design study.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911 SC	1369/1379	1210	2994	204	189	5.7*	146
930 Turbo	1432/1500	1300	3299	300	304	5.1*	162

Carrera (New E-Series) – 1983 to 1984: *1984MY – Wheelbase (mm): 2271 Length/Width (mm): 4291 (Turbo 4318)/1610 (Turbo) **Significant developments:** Carrera replaces SC. Engine capacity climbs to 3164cc, Digital Motor Electronic engine management introduced as was the engine oil-fed chain tensioner. Turbo-look option ads 50 kilos and increases drag.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911 Carrera	1398/1405	1210	3164	231	209	5.6*	152
911 SC RS	1398/1405	960	2994	255	184	5.0	159
930 Turbo	1432/1500	1300	3299	300	319	5.1*	162

Carrera New F-Series – 1984 to 1985: *1985MY – **Significant developments:** Carrera available with catalytic converter. Four-spoke steering wheel standard. **Carrera New G-Series – 1985 to 1986:** 1986MY – **Significant developments:** Sport seats now a no-cost option. Turbo-look track 1434mm front/1526mm rear.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911 Carrera	1398/1405	1210	3164	231	209	5.6*	152
930 Turbo	1432/1500	1300	3299	300	319	5.1*	162

Carrera New H-Series – 1986 to 1987: *1987MY – **Significant developments:** Targa and Cabrio models available with Turbo engine. Slant-nose becomes an option. 915 transmission replaced by Getrag-built G50. Power hood standard on Cabrio. **Carrera New J-Series – 1987 to 1988:** 1988MY – **Significant developments:** Celebration anniversary model available. Club Sport model weighed 50 kilos less, blueprinted engine pushed power to around 241hp. **Carrera New K-Series – 1988 to 1989:** 1989MY – **Significant developments:** 16-inch wheels now standard. Speedster introduced and available with either Turbo-look or flat-nose bodies.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911 Carrera	1398/1405	1210	3164	231	209	5.6*	152
Club Sport	1398/1405	1160	3164	231	209	5.6*	156
930 Turbo	1434/1526	1300	3299	300	319	5.1*	162

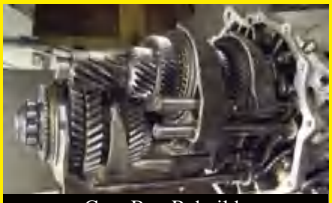
964 (1989 – 1993)

1988 to 1989: *1989MY – Wheelbase (mm): 2271 Length/Width (mm): 4250/1651 – **Significant developments:** Launched in January 1989 with a new flat-six engine, suspension, brakes and numerous body parts, Porsche claim only 13 per cent carry over parts from predecessor. Carrera 4 split torque 31/69 front to rear. All wheel ABS and power steering standard, catalyst introduced. **1989 to 1990:** 1990MY – **Significant developments:** All pre-964 models now deleted. Carrera 2 introduced, Targa and Cabrio available for both Carrera 2 and Carrera 4 models. Tiptronic available on C2. Both Cabrio and Targa 50 kilos heavier than coupé equivalents. **1990 to***

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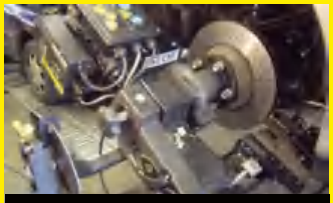
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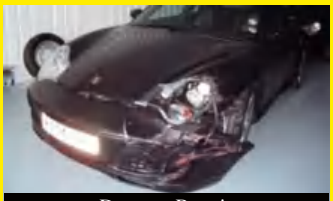
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911 (964): 1989 – 1993

Two-door, two+two Coupé, Convertible and Targa. Rear-mounted six-cylinder air-cooled 'boxer' engine, rear and four-wheel drive. For a company that had very little left in the piggy bank and suffering from an economic and sales downturn, Porsche's engineers pulled off a remarkable achievement when developing the 964-series 911.

This latest 911 was '87 per cent new' over the model it replaced, and the big news surrounding the 964 was the increased capacity flat-six and the introduction of a four-wheel drive transmission. This resulted in the gearbox and rear final drive having two electronically-controlled wet clutches, limiting slip in both the centre and rear differentials. A torque tube connected the centre and front diffs. The torque split was 31:60 front-to-rear.

Joining the new C4 was a Carrera 2 Coupé, Cabriolet and Targa models, three Turbo variants: 320hp 3.3-litre, 360hp 3.6-litre, and a limited run 381hp Turbo S. The stripped-out 964 RS and limited run 3.8 RS were available from 1992.

Overlooked by many, the 964 offers an affordable entry into classic 911 ownership, although they require regular maintenance and some TLC.



911 (993): 1993 – 1996

Two-door, two+two Coupé, Convertible and Targa. Rear-mounted six-cylinder air-cooled 'boxer' engine, rear- and four-wheel drive. Argued by many to be the most beautiful 911 design of all, the 993-series cars are also the best engineered and, for many purists, the pinnacle of the model's achievement.

The last of the air-cooled 911s had it all: pace, grace and, for once, a bit of space. The entry-level Carrera 2 was all you ever really needed, but who could resist the appeal of the Carrera RS or, for the first time, the all-wheel drive, twin-turbocharged Turbo? For the seriously brave there was the GT2 and those after the Turbo look without the go could always opt for the Carrera 2S and 4S.

The 993 also saw the introduction of VarioRam (in 1996). This controlled the length of the engine's induction tracts, and at low and medium engine speeds longer tracts provided a fuller torque curve, while at higher engine speeds the shorter induction length delivered higher peak power outputs.

1991: *1991MY – **Significant developments:** Rear drive, 3.3-litre 320hp 964 Turbo introduced complete with 'Cup' design mirrors.* ***1991 to 1992:*** *1992MY – **Significant developments:** Stripped-out Carrera 2 RS launched – the first RS since 2.7 Carrera RS in 1973 – and proves a hit for those who like their 911s raw. 381hp Turbo S model available to order (80 built).* ***1992 to 1993:*** *1993MY – **Significant developments:** Speedster introduced, rear-wheel drive only and based on Cabriolet for US market. 3.6 Turbo production begins in Jan 1993.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera 2/4	1379/1374	1350/1450	3600	250	228	5.7	162
Carrera 2 RS	1379/1380	1250	3600	260	240	5.3	162
Turbo	1442/1448	1470	3299	320	332	5.0	168
3.8 RS	1440/1481	1210	3746	300	266	4.9	168
Turbo 3.6	1442/1448	1470	3600	360	383	4.8	175

993 (1993 – 1998)

1993 to 1994: *1994 Model Year – Wheelbase (mm): 2272 Length/Width (mm): 4245/1735 (Carrera 4S and Turbo 1795mm) – **Significant developments:** 993 production begins in Jan 1994. Internal engine upgrades increase power and torque. Multi-link rear suspension is one of the biggest developments in the 911's history and transforms 993 into a more driver friendly sports cars. Four-piston brake callipers standard front and rear. Two- and four-wheel drive offered across the range in either Coupé or Cabriolet guise.* ***1994 to 1995:*** *1995MY – **Significant developments:** Carrera RS introduced as is redesigned, all-wheel drive system for Carrera and Tiptronic S with steering wheel-mounted shift controls for automatic gearbox. New 408hp four-wheel drive, twin-turbocharged 911 Turbo is launched and includes a six-speed gearbox and hollow spoked alloy wheels.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera 2/4	1405/1444	1370/1420	3600	272	243	5.6/5.3	168/162
Carrera RS	1413/1452	1270	3746	300	262	5.0	172
Turbo	1411/1504	1500	3600	408	398	4.5	180

1995 to 1996: *1996MY – **Significant developments:** VarioCam engines announced and up both power and torque; revolutionary sliding glass-roofed Targa introduced. Lightweight, 430hp, rear-wheel drive, homologation special GT2 launched. It's the most powerful and fastest 911 production road car ever built.* ***1996 to 1997:*** *1997MY – **Significant developments:** 430hp Turbo S offered as run-out model with 450hp factory engine upgrade also available. Turbo-bodied Carrera 2S built alongside Carrera 4S, but two-wheel drive obviously. It's the last rear-wheel drive, air-cooled 911.* ***1997 to 1998:*** *1998MY – **Significant developments:** An end of an era. Production of the all-wheel drive Carrera 4 and Turbo continues until July 1998 but when the last car finally rolls off the production line (a Carrera 4S) it marks the end of air-cooled 911 production after 35 years. The purists aren't happy, but it signifies a new dawn for Porsche.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera 2/4	1405/1444	1370/1420	3600	285	251	5.2	172
Carrera 2S/4S	1411/1504	1450	3600	285	251	5.2	172
Turbo	1411/1504	1500	3600	408	398	4.5	180
GT2	1475/1550	1290	3600	430	398	4.0	184
Turbo S	1411/1504	1500	3600	430	398	4.3	185

996 (1997 – 2004)

1997 to 1998: *1998 Model Year – Wheelbase (mm): 2350 Length/Width (mm): 4430 (Turbo & GT2 4435)/1765 (Turbo & GT2 1830) – **Significant developments:** All-new water-cooled, 3.4-litre VarioCam six-cylinder 'boxer' engines. Rear-wheel drive, six-speed manual transmission or five-speed Tiptronic S at extra cost. Traction control also available. Four-wheel drive Carrera 4 introduced at the end of the year along with Porsche Stability Management (PSM).* ***1998 to 1999:*** *1999MY – stripped-out, 360hp GT3 introduced. GT1-based engine helps create most focused 996 to date. Additional cooling for radiator, gearbox and engine account for extra weight over standard Carrera 2. Available in 'Comfort' or 'Club Sport' trim, breaks Nürburgring Nordschleife lap record for a production car (8mins 03sec).* ***1999 to 2000:*** *2000MY – the new 911 Turbo arrives. Twin-turbocharged, water-cooled flat-six with VarioCam Plus develops 416hp through four-wheel drive chassis. First 911 Turbo available with Tiptronic S.* ***996 – 2000 to 2001:*** *2001MY – GT2 returns with 462hp, rear-wheel drive, Porsche Ceramic Composite Brakes and no PSM! Breaks production car lap record at the Nordschleife (7min 46sec).*

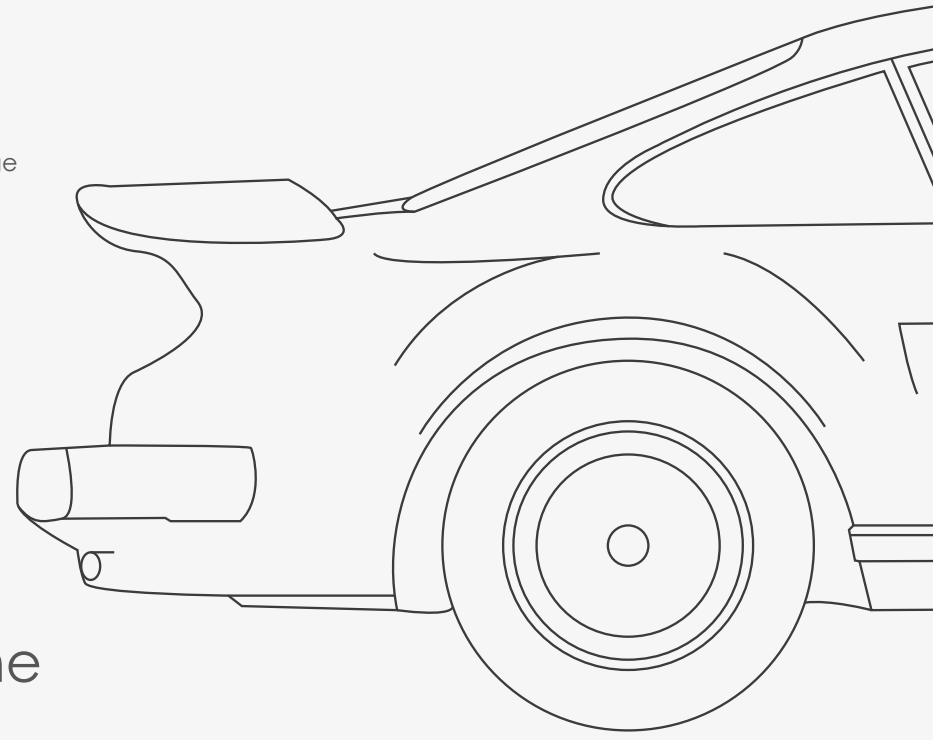
MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
Carrera 2/4	1455/1500	1320/1430	3387	300	258	5.2	174
GT3	1475/1495	1350	3600	360	273	4.8	188
Turbo	1465/1522	1549	3600	416	413	4.2	190
GT2	1485/1520	1440	3600	462	457	4.1	197

New 996 – 2001 to date: *2002MY – **Significant developments:** Second-generation 996 introduced. Engine capacity grows to 3.6-litres, power increase to 316hp. Turbo's trip computer standard across range, as are*

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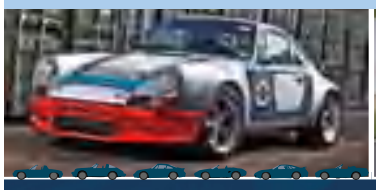
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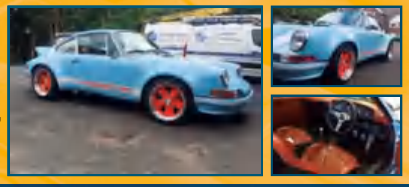
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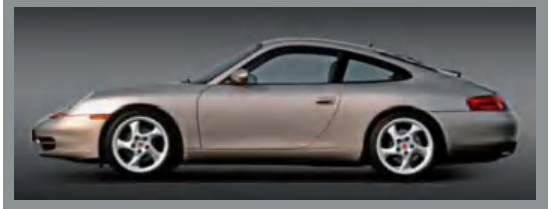
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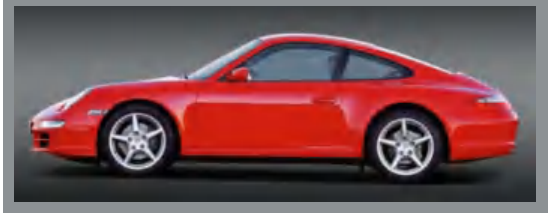
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996: 1997 – 2005

Two-door, two+two Coupé, Cabriolet and Targa. Rear-mounted six-cylinder water-cooled 'boxer' engine. A water-cooled engine in a 911! Whatever next? Once the purists had calmed down, beneath the 996's slightly frumpy looks is one of the greatest cars of our time.

Carrera 2 is all you ever actually need, but the four-wheel drive Carrera 4 and Carrera 4S are unstoppable. The latter, with its Turbo sourced brakes, suspension and bodywork is possibly the best value 911 Porsche has ever built. The 416hp, four-wheel drive Turbo is a contender for the greatest supercar ever built, and swept aside all in its way during its time on the price list. The 462hp GT2 was deemed a tad excessive for most on the road, and didn't enjoy the kudos of its predecessor, nor that of the 911 GT3. This stripped-out 911 was as close to a 911 RS you could get without actually calling it such. One of the most rewarding 911s when it was new, it's still a favourite amongst the purists but subsequent evolutions are better still. GT3 RS was further honed for the track, compromised for the road. The Targa featured the now traditional opening rear glass hatch, while the Cabriolet was perfectly at home in Miami.



997: 2004 – 2012

Two-door, two+two Coupé, Cabriolet and Targa. Rear-mounted 3.6- and 3.8-litre six-cylinder, water-cooled 'boxer' engine. Evolution not revolution, second-generation water-cooled 911 has a hint of 993 look about it. A 321hp Carrera or 355hp Carrera S. PASM as standard on Carrera S. Interior quality improved over 996. Turbo and GT3 models even better than their predecessors, the Turbo model introduces Variable Turbine Geometry and Porsche Traction Managment, the GT3 gets traction control. At 530hp and 204mph, the 997 GT2 is the most powerful and fastest 911 to date.

With the introduction of the Gen 2 997 Porsche offers its greenest car to-date. The heavily revised DFI flat-six now has no intermediate shaft, so should prove more reliable. PDK system is a revelation. Model expansion is greater than with any other 911; Porsche offers a Carrera, Targa, Turbo and GT models Porsche plus four special models, too: the GT2 RS, GT3 RS 4.0, Sport Classic and Speedster.

Of the 22 models only four aren't available with PDK (Sport Classic, GT3, GT3 RS, and GT2 RS and GT3 RS RS 4.0-litre), two models are only available with the seven-speed double-clutch unit (Turbo S and Speedster). Only five models are offered with a narrow body (Carrera and Carrera S – coupé and cabriolets – and the GT3) with the rest of the range all using the wider body first introduced with the four-wheel drive models. Twelve Coupés, seven Cabriolets, two Targas and a Speedster body are available. Three different size of brakes are fitted, one of which is made from ceramic composite material, two suspension systems are available (passive and active – PASM), with five different front and rear track widths also used. Four different engines are offered. Final GTS model is the pick of the bunch.

Turbo headlights. Cup holders fitted for first time. New Carrera 4S introduced with Turbo brakes, suspension and wide-body. 996 Targa model launched with retractable sliding glass roof. ***996 2003 to 2004:*** *2003MY –* ***Significant developments:*** *GT3 returns with 381hp while the GT3 RS has the same power but weighs 20 kilos less thanks to carbon fibre body panels and a plastic rear window. Turbo and Carrera 4S launched as a Cabriolet models, GT2 gets power hike to 483hp. 0-62mph time drops to 4.0 seconds, top speed climbs to 198mph.* ***996 – 2005:*** *2005MY –* ***Significant developments:*** *The 911 Turbo S makes a return and signals the beginning of the end for the 996. 450hp and PCCB come as standard.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera 2/4	1465/1500	1345/1405	3596	316	273	5.0	178
Targa	1465/1500	1415	3596	316	273	5.2	177
Carrera 4S	1472/1528	1470	3596	316	273	5.1	173
Turbo	1472/1528	1540	3600	414	413	4.2	190
Turbo S	1472/1528	1549	3600	450	457	4.1	190
GT3	1485/1495	1380	3600	381	284	4.5	191
GT3 RS	1485/1495	1360	3600	381	284	4.4	190
GT2	1495/1520	1420	3600	483	457	4.0	198

997 (2004 – 2008)

2004: *2005 Model Year – Wheelbase (mm): 2350; Length/Width (mm): 4427/1808; Height (mm) 1310/1300 (Carrera/Carrera S) –* ***Significant developments:*** *3.6-litre 321hp, and 3.8-litre 355hp, water-cooled flat-six engines for Carrera and Carrera S respectively. New six-speed manual gearbox standard on both models, Porsche Active Suspension Management (PASM) standard on Carrera S – lowers car by 10mm, cost-option on Carrera. 19-inch alloy wheels standard for Carrera S.* ***2005:*** *2005MY – Carrera 4 and Carrera 4S launched. Engines as Carrera and Carrera S respectively, rear body widened by 44mm, PSM now equipped with 'pre-filling' brake system to quicken responses.* ***2006:*** *911 Turbo and GT3 launched. The former features Variable Turbine Geometry, Porsche Traction Management and 480hp. The third-generation GT3 is the best all-rounder yet. PASM fitted as standard, as is a 415hp 3.6-litre flat-six engine and traction control. 911 Targa 4 and 4S launched based on the wider Carrera 4/4S shell and feature the full length glass sliding roof. GT3 RS launched. Same power as a GT3 but 20 kilos lighter and unique aero pack.* ***2007****: 997 Turbo Cabriolet launched, followed by the new 911 GT2 with 530hp, rear-wheel drive, traction and stability control, and launch control. 204mph claimed maximum.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-60	TOP SPEED (mph)
Carrera	1486/1529	1395	3596	321	273	5.0	177
Carrera S (Pkit)	1486/1511	1420	3824	355	295	4.4 (4.4)	182
Carrera 4	1488/1548	1450	3596	321	273	5.1	174
Carrera 4S (Pkit)	1488/1548	1475	3824	355	295	4.8 (4.7)	179
Targa 4	1488/1548	1510	3596	321	273	5.3	174
Targa 4S	1488/1548	1535	3824	355	295	4.9	179
GT3	1486/1511	1395	3600	415	298	4.3	192
Turbo	1490/1548	1585	3600	480	457-501	3.6	192
GT3 RS	1497/1558	1375	3600	415	298	4.2	192
GT2	1515/1550	1440	3600	530	501	3.7	204

997 Gen-2 (2008 – 2012)

2008: *2008MY – Wheelbase (mm): 2350; Length/Width (mm): 4435/1808; Height (mm) 1310/1300 (Carrera/Carrera S) –* ***Significant developments:*** *All new 3.6-litre 345hp and 3.8-litre 385hp, water-cooled flat-six engines for Carrera and Carrera S now fitted with Direct Fuel Injection. Six-speed manual gearbox standard on both models and new seven-speed PDK available as option. PASM standard on Carrera S, cost-option on Carrera. 19-inch alloy wheels standard fitment for Carrera S. Minor styling changes to lights and bumpers. New PCM3, Bluetooth and steering wheels. Carrera 4 and 4S model get reflective light strip across tail and identical updates to two-wheel drive models. Cabriolet models of all variants go on sale with Coupés. PDK-equipped cars two-tenths quicker to 60mph, but 1mph slower on top speed.* ***2009:*** *2010 MY – Eagerly awaited Gen-2 997 GT3 is launched with larger capacity 3.8-litre, normally aspirated flat-six. New 911 Turbo quickly follows with all-new 3.8-litre, DFI, twin VTG turbocharged engine, it's the first all-new engine for the 911 Turbo in 35 years. PDK replaces Tiptronic and Porsche offers optional steering wheel mounted paddle-shift controls for the first time. Limited run of 250 Sport Classic models mix Carrera 4 wide-body looks with rear-wheel drive and a 408hp 3.8-litre Powerkit engine. Built by Porsche Exclusive it also features a double-domed roof, ducktail rear spoiler and the return of Porsche's famous Fuchs wheels and PCCB as standard. A bespoke leather interior is also fitted. 911 GT3 RS is announced alongside Sport Classic at Frankfurt. New RS comes with a wider front track, a new aero-pack that doubles downforce, a more powerful version of the Mezger 3.8 litre flat-six and a 25kg drop in kerb weight over a regular GT3. Air-con, PCM and leather are all options.* ***2010:*** *2010MY – 530hp Turbo S available as coupé or cabriolet. PDK with paddle-shift, PCCB, dynamic engine mounts, Sport Chrono and Torque Vectoring are standard. Interior features a dual tone leather trim and adaptive sport seats. The 620hp 911 GT2 RS is the most powerful production Porsche ever. Based on the GT3 RS it features further aero tweaks and recalibrated PASM, Traction and Stability systems. 3.6-litre engine is the final swan song for the Mezger flat-six, and is fitted with a single-mass flywheel and a revised charge air intercooler. It's the first Porsche to feature different N-rated tyres on the front and rear axles. Carbon-fibre bonnet – and front wings if you wish – help shed kilos as does plastic rear and rear quarter windows. Only 500 built, and all sold within three-months. To mark its 25th Anniversary Porsche Exclusive builds 356 911 Speedsters. As with the Sport Classic it features the Carrera 4 body with rear-wheel drive running gear and the 408hp Powerkit 3.8-litre motor. PDK-only transmission, PCCB standard and Pure blue paint or white the only colours. Windscreen 72mm lower than standard and roof is a manual-electric mix that hides under a traditional Speedster double bubble engine cover. First Porsche Speedster for 16 years. The final 997 series 911 could possibly be the best. Carrera GTS is available as either coupé of cabriolet and again mixes the Carrera 4 body with rear-drive; 408hp 3.8-litre Powerkit engine does all the work. Six-speed manual or seven-speed PDK both available, PCCB optional. 19-inch RS Spyder design wheels standard, GTs also*

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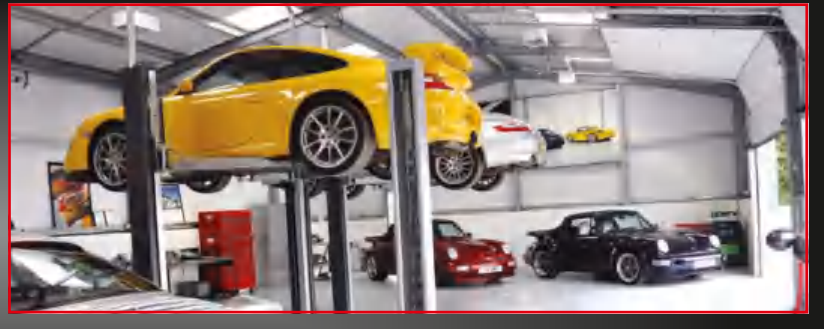


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991 (GEN 1): 2012 – 2015

Two-door Coupé and Cabriolet, water-cooled and direct fuel injected flat-six, rear-engined, rear- and four-wheel drive. Seven-speed manual and PDK gearbox. New, longer wheelbase, new body and design and new interior. The seventh generation of the iconic 911 was as big a step-change from the 997 as the 993 was to the water-cooled 996. The carry-over parts were very few, the changes made were like nothing seen in the last 17 years.

The 911 has always innovated and the 991 was no different. There is the new seven-speed manual gearbox, a world first, dynamic chassis control (a first for the 911) and new, electronic power-steering. The latter causing some to declare the 911 as we know it to have passed away. We wouldn't go that far, although the effect it has on the car's character makes the 991 a very different 911 to all that have been before.

The more powerful, 400hp 3.8-litre has an epic performance reach. For the first time we'd also consider PDK over the manual gearbox, the latter not as slick nor as precise as its predecessor. Although PDK only makes sense with the optional paddleshift controls.

If you opt for either the GT3 or Turbo models PDK is your only option. Porsche claims the double-clutch is not only quicker and more efficient, but it's what the customer wants. The problem many have is that the 911 was the last bastion of the truly wonderful manual gearbox, and now it's gone from the likes of the GT3 and the Turbo it feels like a chapter has closed when we were still left wanting for more.

Advent of GTS models creates a fast road 911 with all the comforts, but in 2015 it's the GT3 RS that blows everyone away. It's one of Prenunger's finest and one of the most track-focused 911s ever created.



991 (GEN 2): 2015 –

The wait is over, the 911 Carrera finally goes turbocharged in the wake of increasingly strict emmisions regulations. It's the biggest step change for the 911 since the shift from air- to water-cooled engines. The face-lift is typically subtle; new bumpers, headlights, rear lamp clusters and vertical slats on the deck lid being the real tell-tale giveaways, there are also revised exhaust tailpipes and a new alloy wheel design.

Four variants appear at first: Carrera Coupé and Coupé S, Cabriolet and Cabriolet S; all run a new 2981cc engine with two small BorgWarner turbochargers. PDK or manual gearboxes are offered. The Carrera versions offer 370hp, the Powerkitted S models 420hp, the Carrera S is the first sub four-second to 60mph 911 Carrera ever, doing it in 3.9-seconds. Carrera 4, Carrera 4S, Targa and Cabrio versions soon follow.

Inside, the 911 falls in line with its siblings with a 918-inspired steering wheel. A new driving mode switch allows the driver to adjust the car's performance, a new Sports Response Button (SRB) shifts the car into a heightened state of readiness for overtaking. Rear axle steering from Turbo and GT3's Nose Lift are Carrera options for the first time. New comfort and convenience features are added inside, too.

feature SportDesign front bumper and deeper sills. Inside is a mix of leather and Alcantara with a new SportDesign wheel also standard. Rear-seats optional. ***2011:*** *A 500hp, normally aspirated 4.0-litre flat-six engine, crank lifted straight from a GT3 R. The 4.0RS is extreme. It weighs 1360kg and has aero dynamic add-ons designed for the Nürburgring. It cherry picks the best bits from every 997 before it to produce the ultimate 997* ***2012:*** *Porsche has time for one last 997 swansong: the Carrera 4GTS. A four-wheel drive version of the Carrera GTS.*

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62* 6sp/7sp	TOP SPEED (mph)
Carrera	1486/1530	1415	3614	345	285	5.1*/4.2	179
Carrera S	1486/1516	1425	3800	385	310	4.3*/4.1	187
Carrera 4	1488/1548	1470	3614	345	285	5.0*	177
Carrera 4S	1488/1548	1480	3800	385	310	4.7*	184
Carrera GTS	1488/1548	1420	3800	408	310	4.6/4.2	190/189
Carrera 4GTS	1488/1548	1480	3800	408	310	4.6	188
Targa 4	1488/1548	1530	3614	345	285	5.2*	176
Targa 4S	1488/1548	1540	3800	385	310	4.9*	184
GT3	1497/1524	1395	3797	435	317	4.0*	194
GT3 RS	1509/1554	1370	3797	450	317	3.8*	193
GT3 RS4.0	1509/1554	1360	3996	500	339	3.9	193
Turbo	1490/1548	1570	3800	500	479	3.6* (3.2**)	194
Turbo S	1490/1548	1585	3800	530	516	2.9**	195
GT2 RS	1509/1558	1370	3600	620	516	3.5	205
Sport Classic	1492/1550	1425	3800	408	310	4.6	187
Speedster	1492/1550	1540	3800	408	310	4.4	190

** 0-60mph: cars fitted with six-speed manual gearbox; ** cars fitted with Sports Chrono Plus and PDK*

991 (2012 – 2015)

2012: *2012 Model Year – Wheelbase (mm): 2450; Length/Width (mm): 4491/1808; Height (mm) 1303/1295 (Carrera/Carrera S) –* ***Significant developments:*** *All new 911s featuring a longer wheelbase, lighter body and more technology than ever. DFI engines carried over from 997, so too is the seven-speed PDK . However, a new seven-speed manual gearbox – based on the PDK – was introduced to replace the six-speed manual. Option of PDCC on a 911 for the first time, dynamic engine mounts and Torque Vectoring. Electric power steering replaced the previous car's hydraulic setup; not one of Porsche's most popular decisions. There was also a new look both inside and out, the new interior regaining the air of quality that some felt had been lacking in more recent 911s. Carrera coupé and cabriolet models were fitted with a 355hp, 3.4-litre engine, Carrera S models with a 400hp 3.8-litre motor.* ***2013:*** *The Carrera 4 and 4S Coupé and Cabriolet (width: 1852mm) joined the line-up at the end of 2012 as 2013 model year cars. Available with the same engine and gearboxes as the Carrera models, four-wheel drive variants equipped with a multi-plate, electronically-controlled version of Porsche Traction Management. Rear was 44mm wider than the two-wheel drive derivatives. At Geneva Porsche revealed the new 911 GT3. Out went the Mezger 3.6-litre engine and in came a 475hp, 3.8-litre DFI based loosely on the Carrera S's motor. No manual gearbox were offered, instead only a heavily revised PDK unit. Active rear-wheel steering, electric power steering and, for the first time, the GT3's shell was taken from the wider C4. Soon after came the new 911 Turbo. Available as either a 520hp Turbo or 560hp Turbo S, both fitted with a PDK gearbox only. Active rear-wheel steering, torque vectoring, PDDC, dynamic engine mounts all available and, for the first time, the 911 Turbo features active aerodynamics for both the front and rear spoilers. The 911 Turbo's body is also 28mm wider than the Carrera 4 at 1880mm.* ***2014:*** *Targa model becomes available with highly effective roof system, only available with all-drive layout, specs are similar to Carrera 4 and 4S, added weight for metal roof system the only real difference. GTS models launched: GTS and 4 GTS variants are later followed by Targa GTS, all retain the same 3800cc DFI engine, yet Powerkitted engine provides 430hp, available in two- or all-wheel drive, manual of PDK, Coupé or Cabriolet, shell sourced from wider Carrera 4 regardless of which you buy, bespoke dampers feature, sports exhaust and PASM standard, revised seven-speed manual 'box, black 20" centre lock wheels, GT3 door mirrors a 'comfy' GT3 – it's an instant classic* ***2015:*** *GT3 RS – A new 4.0-litre version of Porsche's DFI engine producing 500hp, 460Nm torque (around 339lb ft), 0-62 in 3.3 seconds and a top speed of 192mph. A body constructed from aluminium, carbon fibre and magnesium weighing 10kg less than the GT3 (at 1420kg). A staggeringly quick Nordschleife lap time of 7min, 20secs – faster than a Carrera GT. And a devastatingly aggressive aero-led aesthetic. GT3 RS is one of Preuninger's finest. Only available with PDK, the GT3 RS boasts double the downforce of the GT3 with less than a third of its drag-co-efficient. This is unheard of. A new Michelin rubber compound adorns the 9.5x20-inch front wheels and 12.5x21-inch rears providing 20% increased stickiness, with increased spring rates (up 10% over GT3) and a 50-milimetre wider rear axle, the changes between GT3 and GT3 RS are vast. A 'paddle neutral' facility and a 'pit speed' button aid track use. PTV with rear limited-slip differential, PASM active dampers and PSM feature. A Club Sport Package and seats straight from the 918 Spyder have been added inside – Sport Chrono is optional.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera	2012	1380	3436	350	287	4.8	179
Carrera 4	2012	1430	3436	350	287	4.9	175
Targa 4	2014	1540	3436	350	287	5.2	173
Carrera S	2012	1395	3800	400	325	4.5	188
Targa 4S	2014	1515	3800	400	325	4.7	183
Carrera 4S	2012	1445	3800	400	325	4.5	185
Carrera GTS	2014	1495	3800	430	325	4.6	188
Carrera 4 GTS	2014	1515	3800	430	325	4.7	183
GT3	2014	1430	3799	475	325	3.5	196
GT3 RS	2015	1420	3996	500	339	3.3	192
Turbo	2014	1595	3800	520	486	3.4	195
Turbo S	2014	1605	3800	550	516	3.1	197

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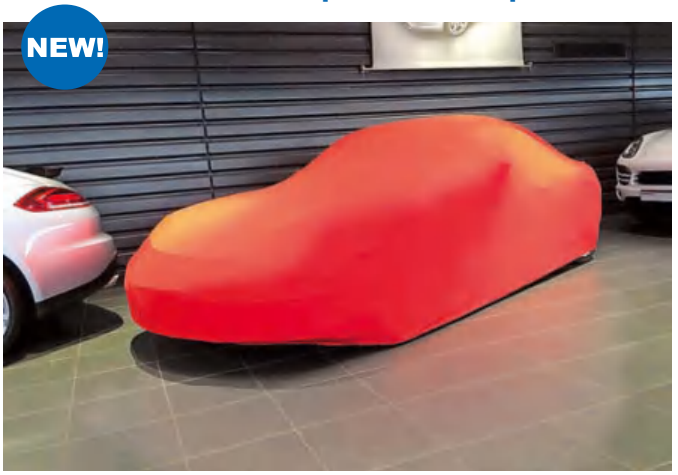


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912: 1965 – 1969; 1975

Two-door Coupé and Targa, rear-engined four-cylinder air-cooled 'boxer' engine. 'The poor man's Porsche' was actually quite expensive, not that this stopped it from building a strong following, especially in the States.

Sharing the 911's body, the 912 was fitted with a 2.0-litre, four-cylinder engine and came with a spartan interior that saw many of the 911's luxuries ditched. Developed on a yearly basis, the 912 closely followed the 911 in terms of new technology and very soon outsold its more expensive brother, with over 30,000 delivered during its first production run. Re-introduce in 1975, a further 2000 examples were built including a Targa Variant.



914: 1970 – 1976

Two-door Coupé with mid-mounted four- and six-cylinder air-cooled 'boxer' engines. Built by Karmann, Porsche's original mid-engined roadster was praised for its unrivalled dynamics, although its boxy looks and awkward gearbox were often criticised. The four-cylinder engines were sourced from VW, and the later six-cylinder Porsche units offered significant performance advantages – and even more of a challenge for the 'entertaining' dynamics. Sales were poor throughout the model's six-year lifespan.



924: 1977 – 1988

Two-door, two+two Coupé, front-engined, four-cylinder water-cooled engine, rear-wheel drive, five-speed gearbox. The 924 was Porsche's first front-engined sports car and production car fitted with a water-cooled engine. Originally conceived, designed and developed for Volkswagen, it was eventually launched as a Porsche, albeit still powered by a VW/Audi sourced engine. Performance wasn't earth-shattering, but its transaxle configuration provided the balance and handling worthy of the badge.

Continual development saw the 924 improve in the performance stakes, especially so when it received the 2.5-litre engine from the 944. Peak performance, however, came with the Turbo models, which delivered the much needed performance gain, ultimately reaching its peak with the Carrera GT, a homologation requirement in order for Porsche to race the car at Le Mans. A handful of more extreme, lighter Carrera GTS models were also built.

Sadly for the 924, with every evolution came a price increase and the coupé quickly went from the affordable entry level Porsche it set out to be, to becoming an expensive, out-dated car.

991 Gen-2 (2015 –)

2015: *2016MY – Wheelbase (mm): 2450; Length/Width (mm): 4499/1808; Height (mm) 1303/1297 (Carrera, Carrera S/Carrera Cabriolet, Carrera Cabriolet S) –* ***Significant developments:*** *All-new 2981cc turbocharged DFI engine with two small BorgWarner turbochargers, seven-speed PDK or seven-speed manual gearboxes offered, the Carrera versions provide 370hp, Powerkitted S models 420hp, Carrera S the first sub four-second 911 Carrera to 60mph at 3.9-seconds (PDK with Sport Chrono), driveability is the big question, torque 332lb ft and 369lb ft respectively, new driving 'Mode' switch provides different driving dynamics, new Sports Response Button shifts the car into a heightened state of readiness for overtaking, for the first time on a Carrera rear axle steering from Turbo is an option, GT3's Nose Lift also available, face-lifted styling is subtle: new bumpers, lights and vertical slats on the deck lid are the real giveaways. There are also revised exhaust tailpipes and a new alloy wheel design – rear wheels now measure 11.5"-wide, overall weight increases, partly due to heavier turbocharged engine, Carrera now weighs 1430kg. All-wheel drive Carrera 4, 4S, Cabriolet 4, Cariolet 4S, Targa 4 and Targa 4S models soon follow. Power and torque identical to Carrera models.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera	2015	1430	2981	370	332	4.2	183
Carrera 4	2015	1480	2981	370	332	4.1	181
Targa 4	2015	1570	2981	370	332	4.3	179
Carrera S	2015	1440	2981	420	369	3.9	191
Carrera 4S	2015	1490	2981	420	369	3.8	189
Targa 4S	2015	1580	2981	420	369	4.0	188

912 (1965 – 1969; 1975)

912 – *Wheelbase (mm): 2211 (1969 – 2268 , 1976 – 2272) Length/Width (mm): 4163 (1976 – 4293)/1610.* ***Significant developments:*** *356C four-cylinder engine, four- or five-speed gearbox, disc brakes, MacPherson front and semi-trailing rear suspension, low-spec interior.* ***1969:*** *Larger wheelbase and 911 body introduced before production ends for six years.* ***1975****: Re-introduced using the 914's VW 2.0-litre. Heavier than its predecessor, five-speed gearbox fitted as standard.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
912	1965 to '69	950	1582	90	86	11.6	115
912E	1975	1132	1971	90	98	13.0	110

914 (1970 – 1976)

914 – *Wheelbase (mm): 2459 – Length/Width (mm): 4050/1650* ***Significant developments:*** *1.7-litre VW four-cylinder and de-tuned 911T 2.0-litre six-cylinder engines offered, MacPherson front and rear trailing link suspension, disc brakes all-round, five-speed gearbox and low-spec interior.* ***1972*** *– 914-6 dropped due to poor sales.* ***1973*** *– 2.0-litre engine becomes an option.* ***1974*** *– Bore increase raises displacement to 1795cc.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	HP	TORQUE (lb ft)	0-62	TOP SPEED (mph)
914 1.7	1970 to '73	970	1679	76	96	13	108
914 1.8	1974 to '76	970	1795	72	99	12	110
914 2.0	1973 to '76	970	1971	95	105	10.5	115
914/6	1970 to '72	940	1991	110	115	8.2	119

924 (1977 – 1988)

924 *Wheelbase (mm): 2400; Length/Width (mm): 4213/1676; Track front/rear (mm) 1418/1372*; ***Significant developments:*** *Four-cylinder engine, four-speed transaxle gearbox, front MacPherson struts and rear semi-trailing arm suspension, four-stud 5.5x14-inch steel wheels and floating callipers. VW/Audi three-speed auto assembly but with ratios specific to the 924;* ***1977:*** *Getrag five-speed dog-leg gearbox optional. Rubbing strips added. Martini 924 SE launched;* ***1978:*** *Bodyshell now hot-dipped zinc-coated. Oval tailpipe introduced;* ***1979:*** *Separate air blowers improve ventilation;* ***1980:*** *Five-speed Audi-derived gearbox introduced. Fuel tank capacity raised to 66-litres, second fuel pump fitted. Le Mans SE model offered;* ***1981:*** *Carrera GT introduced. Kurzhals fuel pump introduced. 50th Jubilee SE model offered;* ***1982:*** *Carrera GTS introduced. Limited-slip diff an option. Torque converter uprated on auto 'box. Ventilation system upgraded. 911 three-spoke steering wheel now standard;* ***1983:*** *Turbo's spoiler becomes standard. Front anti-roll bar uprated to 21mm;* ***1984:*** *924 gets 944 tilt-slide roof mechanism;* ***1985:*** *924 replaced by 924S;* ***1986:*** *924S arrives in UK. 2.5-litre engine shared with 944 (as are gearbox, brakes and suspension) but de-tuned;* ***1987:*** *Rear axle strengthened;* ***1988:*** *924 gets 944 engines. Power steering standard. Le Mans SE launched.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
924	1976 to '78	1080	1984	125	122	9.9	125
924	1979 to '85	1130	1984	125	122	9.9	125
924 Turbo	1979 to '81	1180	1984	170	181	7.8	140
924 Turbo	1982 to '84	1180	1984	177	185	7.7	140
Carrera GT	1981	1180	1984	210	203	6.9	150
Carrera GTS	1982	1121	1984	245	247	6.2	155
924S	1986 to '87	1190	2479	150	144	8.5	134
924S	1988	1195	2479	160	158	8.2	137

928 (1978 – 1995)

928 *Wheelbase (mm): 2500; Length/Width (mm): 4524/1835; Track front/rear (mm): 1551mm –1552/1530 –1529mm.* ***Significant developments: 1978:*** *90° V8, five-speed, rear-wheel drive, independent A arms at front, trailing arms at rear, discs all-round, automatic available, luxury interior* ***1983:*** *Regular 928 and 'S' models replaced with by 928 S2 model;* ***1987:*** *S4 introduced with 5.0-litre V8 and 316hp;* ***1989:*** *928GT loses 44 kilos and gains 14hp. 0-60mph drops below 6.0 seconds;* ***1993:*** *Final 928 GTS sees V8's capacity grow to 5.4-litres and 350hp.*

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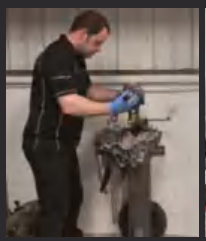
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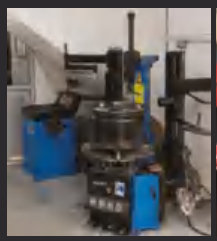
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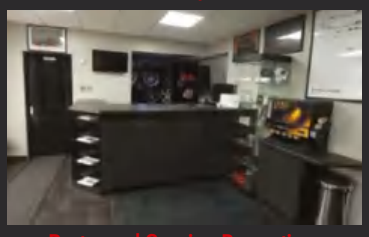
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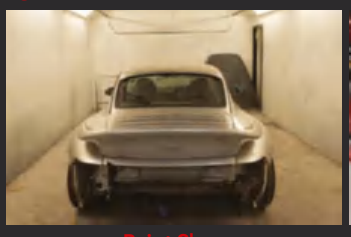
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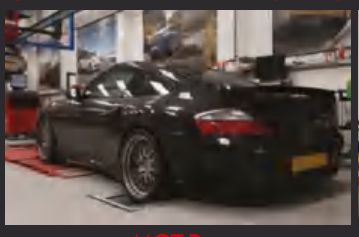
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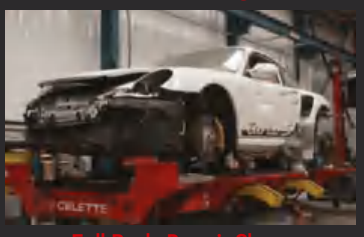
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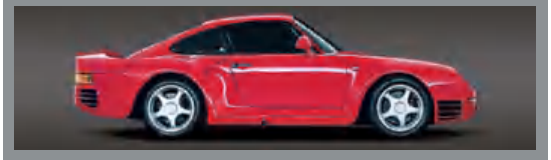
928: 1978 – 1995

Two-door, two+two Coupé, front-engined, water-cooled V8. Built to succeed the 911, 928 went head-to-head with Jaguar's XJS and Mercedes' SL. V8 engine offered stonking performance and grew to a mighty 5.4-litres and a heady 360hp before stepping aside to allow the 911 to continue its success story. Auto 'box most popular choice, although a manual is the one to go for, and both choices offer intergalactic cruising ability. Dynamically as sharp as any Porsche, the 928's popularity is not without foundation.



944: 1983 – 1991

Two-door, two+two Coupé and Convertible, front-engined, water-cooled. NA and turbocharged. The 944 was an unprecedented success, breaking all sales records and keeping Porsche afloat during the 1980s. The 924's body and turbo suspension formed the basis, but the 944 felt better. Turbo models offer good combination of performance and ability, although the last of the line 16-valve S2 models are probably the better option. If your budget doesn't stretch that far a good 2.7 will do. Cabriolet had sleek looks with Coupé's performance, though loss of rigidity takes shine off the driving experience. Considered to be the perfect introduction to Porsche ownership.



959: 1988

Two-door, two+two Coupé, flat-six, twin-turbocharged water/air-cooled flat-six. 197mph, 4WD, supercar. Based (lightly) around the 911, the 959 was Porsche's homologation special for Group B rallying. A technical *tour de force* for its time, the 959 boasted all-wheel drive with active torque split-drive, selectable traction settings (dry, wet and snow conditions), electronically-adjustable ride height and damper control, water-cooled cylinder heads and multi-stage turbocharging, and a 911 evolved composite body providing 'zero-lift'. All 283 959s built cost Porsche more than double the price the customer was as asked to pay.



968: 1992 – 1995

Two-door, two+two Coupé and Cabriolet, front-engined, water-cooled. Porsche's last attempt at a front-engined Coupé resulted in its best effort to date. What the 944 derived 3.0-litre four-cylinder engine lacked in character, its chassis – especially in Club Sport spec – soon made up for. Regular car not as sharp as bare-to-the-bone Club Sport or semi-stripped Sport, but all offer one of the best front-engined/rear-drive experiences. Convertible lacks dynamics and looks a little frumpy, while limited edition Turbo S offer 911 levels of performance. Comparatively cheap to buy and run, 968 is one the safest Porsche ownership experiences.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
928	1978 to '82	1490	4474	240	268	7.5*	142
928 S	1980 to '82	1530	4664	300	284	6.8	146
928 S2	1983 to '86	1589	4664	310	295	6.5*	155
928 S4	1987 to '92	1600	4957	316	317	6.0	165
928 GT	1989 to '91	1566	4957	330	317	5.6	165
928 GTS	1992 to '95	1600	5397	350	362	5.2	169

944 (1983 – 1991)

944 *Wheelbase (mm): 2400, Length/Width (mm): 4213/1735. Track front/rear (mm): 1472/1451;* ***Significant developments:*** *Body based on the 924 Turbo, as was suspension, but used 2497cc engine. Brakes from the 924 Carrera GT;* ***1985:*** *New dash, power steering becomes standard. RHD models have left parking wipers. Transmission casing revised. Cast alloy lower wishbones and semi-trailing rear arms standard;* ***1986:*** *Turbo launched with 2.5-litre engine, gas-filled shocks, anti-roll bars and four-pot brakes. Power steering standard, redesigned interior;* ***1987:*** *LSD revised, ABS, driver and passenger airbags optional. 944 S 16-valve used gearbox and driveshafts from Turbo;* ***1988:*** *Turbo SE offered with uprated engine, 7- and 9x16-inch alloys. 944's engine capacity increased to 2.7-litres with larger bore, new block. Celebration SE offered;* ***1989:*** *944 gets ABS as standard, discontinued at end of model year. Turbo gets Turbo S engine and new rear spoiler. S2 production begins in Jan 1989, Cab in July;* ***1990:*** *S2 Cabrio launched (70kg heavier than Coupé);* ***1991:*** *Turbo Cab launched, airbags standard on European Turbo models.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
944	1982 to '87	1180	2497	163	151	8.4	131
944	1988 to '89	1260	2681	165	166	8.4	136
944 S	1987 to '88	1280	2497	190	170	7.9	142
944 S2	1989 to '91	1310	2990	211	207	6.9	149
944 Turbo	1985 to '88	1350	2497	220	243	6.3	152
944 Turbo	1989 to '91	1350	2497	250	258	5.9	162
944 Turbo S	1988	1350	2497	250	258	5.7	162

959 (1988)

959 – *Wheelbase (mm): 2272 – Length/Width (mm): 4260/1840 –* ***Significant developments:*** *Air-cooled six-cylinder engine, liquid-cooled heads, four-valves per cylinder, twin turbocharged. All-wheel drive, six-speed gearbox, active split-driver, double wishbone suspension front and rear with adjustable ride height. Aluminium and composite body panels, four shocks per 17-inch wheel, 322 and 308mm discs front/rear. Adjustable ride height and dampers.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
959	1988	1451	2847	450	370	3.7	197

968 (1992 – 1995)

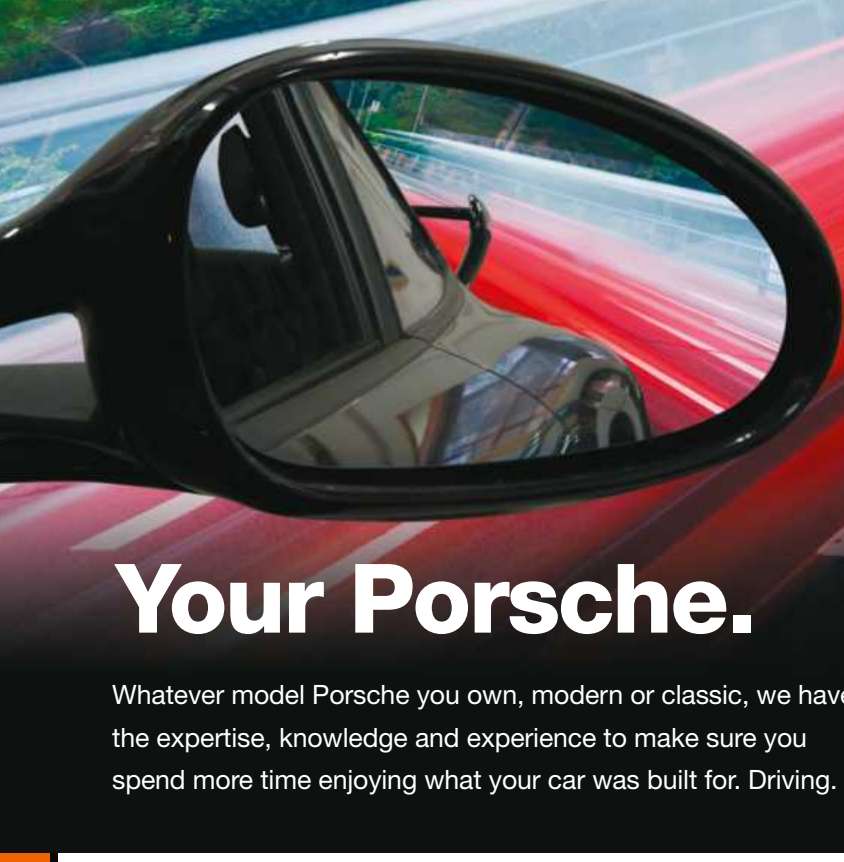
968 – *Wheelbase (mm): 2400, Length/Width (mm): 4320/1735, Track front/rear (mm): 1477/1451 (1457/1445 with 17" wheels)–* ***Significant developments:*** *3.0-litre four-cylinder S2-derived engine, S2 suspension, four-pot fixed callipers, ABS and 7- and 8x16-inch alloys;* ***1993:*** *Lower spec and stripped down Club Sport launched with 7.5x17-inch alloys (front) and 9x17-inch (rear), no driver's airbag and all 'unnecessary' equipment (electric windows, sunroof etc) removed. Turbo S launched with 8-valve Turbo head and 305hp. Similar spec to CS;* ***1994:*** *968 Sport introduced with same chassis tweaks as Club Sport but with a number of creature comforts (and weight) reinstated. Standard 968 dropped from line-up, Sport and Club Sport continue for a further 12 months.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
968	1992 –1994	1370	2990	240	225	6.5	156
968 Sport	1994 –1995	1400	2990	240	225	6.5	156
968 Club Sport	1993 –1995	1320	2990	240	225	6.3	160
968 Turbo S	1993 –1994	1300	2990	305	369	5.0	175

Boxster 986 (1997 – 2004); 987 (2005 – 2009; 2009 – 2013); 981 (2013 –2015)

BOXSTER – *Wheelbase (mm): 2400, Length/Width (mm): 4133/1740 Track front/rear (mm): 1465/1528 ('96-'03), 1455/1514 (03-04) –* ***Significant developments:*** *Introduced in 1997 with 2.5 'boxer' engine, five-speed manual transmission, four-pot callipers front and rear, ABS, dual and side airbags;* ***1999:*** *Boxster S launched with 3.2-litre version of boxer engine and six-speed gearbox. White dials, titanium-trimmed windows and twin-centre exit exhaust pipes and larger 17-inch alloy wheels only exterior change to distinguish 'S' from standard model. Entry-level Boxster's engine capacity raised from 2.5- to 2.7-litres. resulting in healthy power hike to 220hp. Both models available with five-speed Tiptronic gearbox;* ***2003:*** *Boxster's first face-lift. Both 2.7 and 3.2S models gain extra 8hp, raising power to 228hp and 252 respectively. S's torque also up by 3lb ft. Front and rear bumpers are new, and the air intakes are improved for both aerodynamics and cooling. New retractable rear spoiler also fitted. Clear indicators, upgraded interiors (cup holders), sportier exhaust note and lighter alloy wheels help differentiate the new from the old.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Boxster 2.5	1997 to '99	1260	2480	205	180	7.0	155
Boxster 2.7	1999 to '02	1260	2687	220	192	6.6	156
Boxster S	1999 to '02	1295	3197	252	225	5.9	161
Boxster 2.7	2003 to '04	1275	2687	228	192	6.4	157
Boxster S	2003 to '04	1295	3179	260	228	5.7	164



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BOXSTER (986): 1997 – 2004; BOXSTER (987): 2005 – 2012

Two-door, mid-engined, six-cylinder convertible. The saviour of Porsche after the recession-hit '90s, the Boxster offered true entry-level Porsche ownership. 911-esque looks drew criticism from press (and 911 owners!), but sublime chassis and instant responses more than made up for this. Early straight-line performance worries of original cars now totally forgotten thanks to 2.7 and 3.2 S engines. Boxster S is now serious contender for the only Porsche you'll ever need. Superb chassis dynamics provides Boxster with serious point-to-point ability and rewards are purer for some than current 911s. Image not the strongest, but crucially Boxster stimulates all the right senses and is a real mini-911 with down-to-earth running costs.

Eight years after the first car's launch a heavily revised Boxster arrived. Both the 2.7 and 3.2 S feature slightly improved straight-line performance and a new exterior, but the real step forward is in cabin quality, which now mimics the 997's for layout and quality.

With the old Boxster still at the top of the roadster pack, Porsche needed to do little to the driving dynamics to keep the new model fresh. However, like it did with the 997, Porsche has achieved the impossible and made an almost perfect car even greater. S receives Cayman S's 3.4 engine, 2.7 gets 5hp boost.

2010 saw the introduction of the lightest Porsche road car: the Boxster Spyder. Weighing 80kg less than the Boxster S on which it is based it's been on a extreme diet. The electronic hood is replaced by a canvas rain cover saving 21kg. The doors and front luggage lid are aluminium and the interior has been comprehensively stripped with no radio, air-con, cup holders, door pulls and door bins. Even the wheels are lighter. The Boxster was already a dynamic masterpiece, but the Spyder takes things to the next level. Replacing the original Boxster was never going to be an easy task, but in the 981 it appears Porsche managed to do just that.



BOXSTER 981: 2012 –

Two-door, two-seat, mid-engined roadster. 2.7 or 3.4-litre water-cooled flat-six, rear-wheel drive, six-speed manual gearbox fitted as standard, seven–speed PDK double-clutch gearbox available as an option. How do you improve on perfection? In the Boxster's case we're not sure how but we're sure glad they had a go. What, on paper at least, looks like a collection of individual improvements and upgrades amount to a finished product that is one of Porsche's very best road cars.

The Boxster has always been inherently right and in the 981 Porsche improved on its mid-engined dynamics further still allowing you to maximise the performance on offer from either of its flat-six engines. That it also looks more honed and aggressive, has a far greater quality interior and now comes equipped as standard with those little bits of kit that should have always been so, makes for one of the best sports car packages you can buy.

The 2.7 needs enthusiasm to extract the most from it and if it was our money we'd go for a 3.4S straight-out-the-box with only a slippy diff the essential extra to take full advantage of the car's sublime chassis.

BOXSTER 987 (2005MY –) *Wheelbase (mm): 2415, Length/Width (mm): 4315/1780. Track front/rear (mm): 1490/1534 (2.7), 1486/1528 (3.2S) –* ***Significant developments: 2005:*** *2.7 and S launched with subtly revamped exterior and new interior. 2.7 gains 12hp over old model, while 3.2-litre ups power by 20hp. Torque is also increased in both cars. PCCB, PASM and Sport Chrono pack are optional extras, variable ratio steering rack standard;* ***2006:*** *2007 Model Year – VarioCam Plus engines from the Cayman and Cayman S replace existing engines; power up to 245hp and 295hp respectively, revised Tiptronic S software;* ***2009:*** *2009 Model Year – All-new flat-six engines: 255hp 2.9-litre is new entry model, 310hp 3.4-litre motor with direct-fuel injection for the S. Six-speed manual gearbox standard, seven-speed PDK optional. Limited-slip differential, touchscreen sat-nav and Bluetooth phone are all optional extras. Both models get new front and rear bumpers.* ***2010:*** *The lightest production Porsche money can buy goes on-sale in the form of the Boxster Spyder. Electric folding roof is replaced with a Lotus Elise style canvas rag, there's a new engine cover, aluminium doors and front luggage compartment lid and the radio, sat-nav and air-con have all been ditched. The standard seats are hip hugging sport bucket items and the doorcards and door pulls are inspired by the 911 GT3 RS. There is even a set of lighter alloy wheels and the ECU map from the Cayman S to extract a further 10hp from the 3.4-litre motor. Six-speed manual is standard, PDK optional with Sport Chrono Plus and Launch Control Porsche claim a 4.8-second 0-62mph time.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
Boxster 2.7	2005 to '07	1295	2687	240	200	6.2	160
Boxster 3.2S	2005 to '07	1345	3179	280	237	5.5	168
Boxster 2.7	2007 to '09	1295	2687	245	201	6.1	160
Boxster 3.4S	2007 to '09	1345	3386	295	251	5.4	169
Boxster 2.9	2009 to '12	1335	2893	255	214	5.9	163
Boxster 3.4S	2009 to '12	1355	3436	310	265	5.3	170
Boxster Spyder	2010 to '12	1275	3436	320	273	5.1	166

BOXSTER 981 (2012MY –) *Wheelbase (mm): 2475, Length/Width (mm): 4374/1801. Track front/rear (mm): 1526/1536 (2.7), 1526/1540 (3.4S) –* ***Significant developments: 2012:*** *Just like the 911 the Boxster came in for a major overhaul in 2012, its first since the original was launched in 1996. A longer wheelbase, lighter, wider track and cleaner, more efficient engines the Boxster had grown into a true thoroughbred. The range now started with a 265hp 2.7-litre engined Boxster, fitted with a six-speed manual as standard or available with the optional seven-speed PDK (which adds 30kg to the kerbweight). The Boxster came with the same transmission options but was powered by a 315hp 3.4-litre engine. PASM is optional on both models, so too are dynamic engine mounts and Porsche Torque Vectoring which also includes a mechanical locking differential. Electromechanical power steering is standard. Wheels sizes range from 18 through to 20s, and the brakes are more powerful, the S borrowing its discs and callipers from the 991 Carrera. An electric parking brake is now standard, PCB still optional. The 981 wears a completely new body and new roof and the interior takes its styling cues from the 991.* ***2015:*** *Boxster Spyder arrives. Reminiscent of its 987 forebear, the 981 Spyder is a topless GT4 without the input of Weissach: 3.8 911 power, 30kgs lighter than the Boxster GTS, manual only like GT4 – no PDK, 911 Carrera brakes, 918-style steering wheel and seats. Bereft of a radio or air-conditioning system, these can be reinstated at no cost. £15,000 dearer than the old Spyder, but it's the most radical Boxster we've ever seen. At only £4000 cheaper than the GT4, a proper Porsche Motorsport model, though it's only for the hardcore wind-in-the-hair aficionados.*

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Boxster 2.7	2012 –	1310	2706	265	206	5.8	164
Boxster 3.4S	2012 –	1320	3436	315	265	5.1	173
Boxster Spyder	2015	1315	3800	375	TBC	4.5	TBC

Cayman 987 (2005 – 2009; 2009 – 2013), 981 (2013 –)

Cayman S – *Wheelbase (mm): 2415, Length/Width (mm): 4315/1801, Track front/rear (mm): 1490/1534 (Cayman), 1486/1528 (Cayman S);* ***2006*** *– 3.4-litre water-cooled flat-six is enlarged Boxster S engine with 997 Carrera 2 internals producing 15hp and 14lb ft of torque over the mid-engined roadster. Six-speed manual gearbox is standard with first and second ratios shorter than those found in the Boxster S. Tiptronic S optional, variable rate steering also carried over from Boxster and Carrera models. Boxster S brakes standard fitment, but PCCB optional as is Porsche Active Suspension Management (PASM) and Sports Chrono pack. Body is 100 per cent stiffer than Boxster S, and is as stiff as a 997 Carrera 2 Coupé, Porsche Stability Management (PSM) comes as standard;* ***2006:*** *2007 Model Year – Entry-level Porsche coupé receives 2.7-litre flat-six engine fitted with VarioCam Plus technology. Five-speed manual gearbox standard, six-speed manual and five-speed Tiptronic S available as option. Steel springs and gas dampers standard, PASM optional;* ***2009:*** *2009 Model Year – All-new flat-six engines with 265hp 2.9 replacing 2.7 engine, with a new 320hp 3.4-litre motor for the S, which also comes with direct-fuel injection as standard. Six-speed manual gearbox standard with seven-speed double clutch PDK an option. Optional limited-slip differential turns it into a genuine 911 alternative. Mild redesign includes new bumpers and head and tail-lamps. PCM3 is available with touchscreen sat-nav and Bluetooth phone capability.* ***2011:*** *2011 Model Year – Cayman R introduced; lighter more powerful version of Cayman S with 330hp and 1295kg kerb weight. Aluminium doors and front bonnet, 19-inch wheels and an Alcantara sport interior. First R model in 43 years. Series production car.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
Cayman S	2005 – '09	1340	3386	295	251	5.4	171
Cayman 2.7	2007 – '09	1300	2687	245	201	6.1	162
Cayman 2.9	2009 – '12	1330	2893	265	221	5.8	164
Cayman S	2009 – '12	1350	3436	320	273	4.9	171
Cayman R	2011 –'12	1295	3436	330	273	5.0*	175

**manufacturer's claim*

Cayman 981 – *Wheelbase (mm): 2475, Length/Width (mm): 4380/1801, Track front/rear (mm): 1526/1536 (Cayman), 1526/1540 (Cayman S);* ***2013*** *– 275hp, 2.7-litre and 325hp 3.4-litre DFI flat-six engines. Six-speed manual gearbox standard, seven-speed PDK optional (adds 30kg). New, lighter body and longer wheelbase; electromechanical power steering standard. PASM, Porsche Torque Vectoring and*

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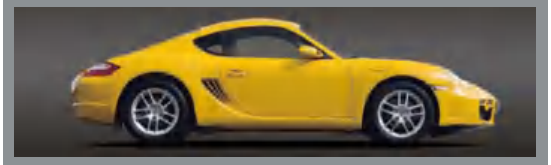
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CAYMAN 987: 2005 – 2013

Two-door, mid-engined, six-cylinder coupé. Its near perfect weight distribution and mid-engined dynamic stability make the Cayman one of the finest drivers' cars ever made. This is something Porsche is acutely aware of, hence the model is not available with a limited-slip differential and, until further notice, we will only see smaller-engined variants of the Cayman to avoid any deflection for the company's headline sports car.

At the end of 2010 Porsche announced the Cayman R at the LA Auto Show. Following a similar development programme as the Boxster Spyder, the Cayman R is a lighter, more powerful version of the Cayman S. Power is up 10hp to 330hp, and the kerb weight drops 55kg to 1295kg. Aluminium for the bonnet and doors and a stripped interior and a smaller fuel tank are all contributing factors to the weight loss.



CAYMAN 981: 2013 -

Two-door, mid-engined, six-cylinder coupé. Like its Boxster sibling the Cayman underwent a thorough overhaul in 2012, which must have been a thankless task for the engineers as the outgoing 987 was deemed one of the best sports cars money could buy.

Once again, though, Porsche's engineers came up trumps and produced a truly sensational car. Still sharing much with the Boxster – wheelbase, engines, gearbox, suspension and steering – the Cayman was finally let of its leash and allowed to show us just what it is capable of. Alert, precise, involving and dynamically astute, the 981 Cayman is one of the purest drivers cars and greatest sports cars to have come out of Stuttgart. It really is that good.

The 2.7-litre car needs working hard to maximise its performance, but the 3.4S is honey sweet providing the perfect blend of performance with precision to make it one of the quickest cross-country cars you can buy. The manual is still the slick six-speed car carried over from the 987 and is still the default option. Even the electric power steering doesn't seem to effect the Cayman like it does the Boxster and Carrera models. Porsche perfection? Possibly.



CAYENNE: 2014 –

Five-door, front-engined SUV. The changes are subtle for this, the fourth generation Cayenne ahead of the arrival of a completely new model expected in 2017. Five models were made available at launch, very much continuing where the previous version left off: S, Turbo, Diesel, Diesel S, and S E-Hybrid. They now have more power and torque, lower fuel consumption, sharper and cleaner exterior design and increased levels of interior comfort. Visual changes primarily comprise a longer aluminium bonnet, shapelier headlights (now incorporating the daytime running lights in a similar fashion to the Macan) and revised rear styling to match. Adaptive cooling vanes hidden in the front bumpers of the *mechanical locking diff all optional as is the Sport Chrono pack and launch control and a sports exhaust. 18-20-inch wheels available, brakes carried over from the Boxster, including 991 Carrera stoppers for the Cayman S, PCCB optional. New interior as per 981 Boxster making the Cayman a serious alternative to a 911. As with all modern Porsches it is very spec sensitive and in our experience less always amounts to more.* ***2014:*** *Cayman GTS arrives and finally moves the Cayman story on. 3.6-litre flat-six produces 340hp with 280lb ft torque. The heaviest Cayman to date (1345) is offset by the additional power, the package has been tailored to provide the best possible driving experience. PASM and Sport Chrono with Dynamic Engine Mounts come as standard. Standard GTS alloy wheels are 8 (front) and 9.5 (rear) x20-inch Carrera S rims. A no cost option is Sports suspension lowering the car by -20mm. The one to have.* ***2015:*** *The Cayman we'd all been waiting for. 991 Carrera S 3.8-litre flat six, GT3 aluminium suspension and chassis parts, PTV, PSM fitted as standard. Only available with a six-speed manual gearbox, shade lighter than the GTS (1340kg) but the rest of the figures don't do it justice. The 385hp figure is conservative, it feels quicker, 310lb ft toque equate to a 0-62 time 0.2-seconds quicker than the GTS. Six-piston calipers (front), four-piston calipers (rear), ventilated discs or optional PCCB. A cut price GT3 and finally a Cayman to give the 911 a run for its money.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62*	MAX MPH
Cayman 2.7	2013 –	1310	2706	275	213	5.7	165
Cayman 3.4S	2013 –	1320	3436	325	272	5.0	175
Cayman GTS	2014 –	1345	3436	340	280	4.6	177
Cayman GT4	2015-	1340b	3800	385	310	4.4	183

**manufacturer's claim*

Cayenne (2003 – '07; 2007 – '10; 2010-'13; 2014–)

Cayenne – *Wheelbase (mm): 2855, length/width (mm): 4782 (4786 Turbo)/1928, track front/rear (mm): 1655 – 1641/1670 – 1656 (17-20-inch wheels); Introduced in 2003 with choice of normally-aspirated or twin-turbocharged 4.5-litre V8. Six-speed manual gearbox for five- and six-speed Tiptronic S for Turbo (optional on S). Porsche Active Suspension Management (PASM), adjustable ride height, electronic damper control, differential locks, six-pot callipers, 18-inch alloys standard, 19-and 20-inch optional. Porsche Traction Management, PSM, ABS, ABD and ASR all standard;* ***2004:*** *Entry-level Cayenne is the first Porsche to sport V6 power. 24-valve engine produces 250hp and 228lb ft, transmitted through a six-speed manual transmission. Steel springs standard, PASM and air suspension optional. V6 is also fitted with smaller brakes;* ***2006:*** *2006 Model Year – Cayenne Turbo S gains an extra 72hp, 0-62mph in 5.2 seconds, 167mph and 2355 kilos;* ***2007:*** *2007 Model Year – Second generation Cayenne: V6, V8 S and Turbo all get direct fuel injection engines to improve performance, economy and emissions, while face-lift improves the looks. Porsche Dynamic Chassis Control active anti-roll bars available on cars with PASM;* ***2007:*** *2008 Model Year – GTS model introduced. Combines Turbo looks with V8 S running gear. Shorter ratios in both manual and Tiptronic gearbox fitted. Turbo brakes standard. New Turbo S model announced. Power up to 550hp, torque to 553lb ft, 174mph and a 0-60mph in 4.3 seconds;* ***2009:*** *2009 Model Year – Porsche does the dirty and introduces a Cayenne diesel. Three-litre Audi sourced V6 is available in entry-level trim only but comes with six-speed Tiptronic S as standard. 100-litre fuel tank capacity provides over 600 mile range and 30mpg.* ***2010 Cayenne –*** *Wheelbase (mm): 2895, length/width (mm): 4846/1939, track front/rear: 1655 (1643 Turbo)/1669 (1657 Turbo); Introduced in 2010 this is the first all-new Cayenne since the original. Bigger in every dimension the new Cayenne's design does an amazing job of disguising the car's larger dimensions and its natural bulk. Engine range is carried over from the previous model but now includes Porsche's very first Hybrid powered vehicle with the Hybrid Drive model which sees a 3.0 supercharged V6 working in parallel with a 47hp electric motor. All but the entry level Cayenne V6 petrol are equipped with a new eight-speed Tiptronic automatic gearbox (the V6 gets a six-speed manual as standard). Porsche has also done away with the original Cayenne's heavy duty four-wheel drive system, replacing the low ratio gearbox with the latest development of Porsche Traction Management with the enhanced electronics of the new Tiptronic S transmission. Diesel and Hybrid models get permanent all-wheel drive, while the others get an active system. PASM, PDCC and PCCB are all optional extra. All Cayenne's also get a new interior based on the design first seen in the Panamera and provides a higher level of quality and refinement that was missing in the outgoing model.* ***2012:*** *The line-up grows with the introduction of the GTS. Fitted with the same 4.8-litre V8 as the Cayenne S, the GTS engine receives a host of modifications and upgrade that push power to 420hp and torque to 380lb (up 20hp and 11lb ft respectively). Eight-speed Tiptronic S is the only gearbox fitted and the chassis combines steel springs with PASM. Air suspension is an option. The GTS rides 24mm lower than an S, has a wider front and rear track and 20-inch wheels are standard. Front bumper and lights are from the Cayenne Turbo, there is a new lower lip spoiler, side skirts and a bi-plane rear wing. The windows are framed with a black gloss trim. Leather and Alcantara trims the interior.* ***2013:*** *Two new Cayenne's for the 2013 model year: the S Diesel and the Turbo S. The latter is a bell-and whistles Turbo with the boost wound up and the power increased 50hp to 550hp. Two-tone leather options are standard as is a host of standard equipment that is optional on the Turbo. The S Diesel takes a twin-turbo charged 4.8-litre Audi V8 diesel and creates the best Cayenne we've sampled. The spec is the same as the petrol engined S, but with enough torque to tear-up the book of torque cliches.* ***2014:*** *Fourth generation Cayenne offers five models at launch continuing where the previous version left off: S, Turbo, Diesel, Diesel S, and S E-Hybrid. More power and torque, lower fuel consumption, sharper and cleaner exterior design and increased levels of interior comfort. Longer aluminium bonnet, headlights incorporate DRL, new 918-style steering wheel. 3.6-litre biturbo replaces V8 petrol engine, it's the same unit found in Macan (420hp and 550Nm torque). S E-Hybrid uses the same drivetrain as Panamera S E-Hybrid, although there are differences – chiefly the batteries which are now more optismised for greater performance.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62/60*	MAX MPH
Cayenne S	2003 to '06	2245	4511	340	310	7.2	150
Cayenne Turbo	2003 to '06	2355	4511	450	457	5.6	165
Cayenne	2004 to '06	2160	3189	250	228	9.1	133
Cayenne Turbo S	2006 to '07	2355	4511	521	531	5.2	167
Cayenne	2007 to '10	2160	3598	290	283	8.1	141
Cayenne S	2007 to '10	2225	4806	385	369	6.5*	156
Cayenne Turbo	2007 to '10	2355	4806	500	516	5.0*	171
Cayenne GTS	2007 to '10	2225	4806	405	369	6.1	157
Cayenne Turbo S	2008 to '10	2355	4806	550	553	4.0	174

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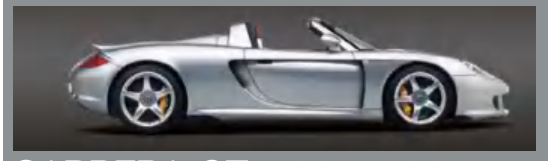
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new Cayenne are akin to those used on the 918 Spyder, as is the rollerball-style steering wheel, much like Macan.

The biggest news is that the old petrol V8 has been replaced with a 3.6-litre biturbo petrol engine – part of Porsche's downsizing practices. It's the same unit we've seen in the Macan, and with 420hp and 550Nm torque on paper the new Cayenne offers greater performance than its eight-cylinder forebear. But, if you're talking about a petrol Cayenne then it's really all about the Turbo. In the Turbo we get the 4.8-litre bi-turbo V8 engine putting out 520hp with 750Nm of torque; it's fast and capable.

The Diesel and Diesel S should be the best-selling Cayenne models for Porsche in the UK. The Diesel model makes use of the three-litre V6 coupled to the eight-speed Tiptronic. We expect that this will be the more popular choice in the UK, but the Diesel S really is brilliant and worthy of serious consideration despite being an older engine (the only engine which is not Euro 6 compliant) and commanding an £11,572 price premium over the £49,902 for the Cayenne Diesel. The power delivery is refined and almost like a petrol car, arriving low down. What's interesting is that the Diesel S is almost as quick as the Turbo, over £30,000 cheaper, and it's more economical.

The first plug-in Hybrid vehicle in the premium SUV segment, the S E-Hybrid uses the same drivetrain as the Panamera S E-Hybrid, although there are differences – chiefly the batteries. Driving requires an altogether new mindset. At £61,434 it's almost exactly the same price as the Diesel S – choosing between them is a question of priorities.



CARRERA GT: 2003 – 2006

Two-door, mid-engined, V10 Roadster. Still born Le Mans racer evolves into the greatest supercar every built. Carbon-fibre tub, 612hp V10, 205mph maximum and a birch wood gear knob. Perfection!



PANAMERA: 2009 – 2013

Five-door, front-engined, rear-and four-wheel drive saloon-coupé; normally aspirate, turbocharged and supercharged V6 and V8 petrol, diesel and hybrid engines, six-speed manual and seven-speed PDK transmission. The last new Porsche to be launched while Dr. Wendelin Weideking was running the company, the Panamera is Porsche's fourth model line and, according to the company, a car that creates a new class. Powered by either a normally aspirated 4.8-litre V8 or a twin-turbo charged version of the same engine, Panamera is available in rear-wheel drive 'S' guise with a six-speed manual gearbox, or an all-wheel drive 4S or Turbo (both only available with the 7-speed PDK gearbox, which is also an option for the S).

3.6-litre V6 engine added to the line-up in 2010 with rear and four-wheel drive options. Rear-drive model gets six-speed manual as standard, Panamera 4 the seven-speed PDK and PASM suspension. V6 offer all the luxury and comfort of the V8 models. Only a four-seater, the Panamera's interior is the most striking Porsche has designed for decades, and as you'd expect of such a car there is very little in terms of luxury or convenience that has been omitted from the specification or options list.

Panamera range is extended further with the cracking diesel model in 2011, along with the S Hybrid and slightly bonkers Turbo S. The former two are rear-wheel drive only

Cayenne Diesel	2009 to '10	2240	2967	240	405	8.3	133
Cayenne	2010 – '13	1995	3598	300	295	7.5	143
Cayenne Diesel	2010 – '13	2100	2967	240	405	7.8	135
Cayenne S	2010 – '13	2065	4806	400	369	5.9	160
Cayenne S Hybrid	2010 – '13	2240	2995	380[1]	427[1]	6.5	150
Cayenne Turbo	2010 – '13	2170	4806	500	516	4.7	172
Cayenne GTS	2012 – '13	2085	4806	420	379	5.7	162
Cayenne Turbo S	2013 – '13	2215	4806	550	553	4.5	175
Cayenne S Diesel	2013 – '13	2195	4134	382	627	5.7	156
Cayenne	2014 -	2040	3598	300	295	7.7	143
Cayenne Diesel	2014 -	2110	2967	262	427	7.3	137
Cayenne S	2014 -	2085	3604	420	405	5.5	160
Cayenne S Diesel	2014 -	2215	4134	385	626	5.4	156
Cayenne S E-Hybrid	2014 -	2350	2995	416	324	5.9	150
Cayenne GTS	2014 -	2110	3604	440	442	5.2	163
Cayenne Turbo	2014 -	2185	4806	520	553	4.5	173
Cayenne Turbo S	2014 -	2235	4806	570	590	4.1	176

1 when combined with electric motor. * 0-60 mph time

Porsche Carrera GT (2003 – 2006)

Carrera GT *– Wheelbase (mm): 2730, Length/Width (mm): 4613/1921, Track front/rear (mm): 1612/1587* ***Significant developments:*** *All alloy, 40-valve V10 with titanium conrods, nickel/silicone liners, dry sump lubrication and VarioCam, revving to 8400rpm. Rear-wheel drive with six-speed manual gearbox. Carbon fibre monocoque with steel crash structures and carbon fibre bodywork. Double wishbone pushrod axles from and rear, 19-inch magnesium alloy wheels, 380mm ceramic composite discs front and rear with six-pot callipers. Built at Leipzig plant in Berlin, in left-hand drive only, over 1260 examples were built between November 2003 and May 2006.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
Carrera GT	2003 to '06	1380	5733	612	435	3.9	205

Panamera: 2009 – 2013: 2014 – To Date

Panamera S, 4S, Turbo – *Wheelbase (mm): 2920, Length/Width/Height (mm): 4970/1931/1418, Track front/rear (mm): 1658/1662 (1656/1646 Turbo);* ***2009*** *– 2010MY 400hp 4.8-litre water-cooled eight-cylinder engine or 500hp 4.8-litre water-cooled twin-turbocharged eight-cylinder engine, DFI and VarioCam Plus with adjustable valve lift; six-speed manual gearbox and rear-wheel drive for S model, seven-speed PDK optional; 4S and Turbo models feature electronically controlled four-wheel drive transmission with PTM and PDK fitted as standard along with Auto Stop-Start. Engines are adapted from Cayenne, PDK transmission is unique to Panamera and differs from the unit in the company's sports cars. Double-wishbone front suspension, multi-link at the rear with PASM standard on all models, self-levelling adaptive air-suspension standard on Turbo. PSM comes as standard featuring: ABS brakes; ASR anti-slip control; MSR engine drag force control; ABD automatic brake differential; Brake Assistant; and a pre-filling of the brake system. PDCC and PCCB optional on all models. 18-inch wheels standard on S and 4S, 19-inch on Turbo; Variable rate steering standard, speed sensitive Servotronic steering optional. All models feature adaptive aerodynamics, with the S and 4S models utilising a two-way spoiler and the Turbo a four-way item. 4S and Turbo get 100-litre fuel tanks, the S has a 80-litre tank. Four individual seats for interior. Eight airbags fitted as standard; bi-xenon headlights standard across the range, adaptive light function for Turbo. Radar-based distance cruise control, four-zone air-conditioning, Porsche Entry & Drive (standard on Turbo) and Burmester High-End Sound system all feature on the options list. Sports Chrono Package Plus also optional and when combined with PDK offers Launch Control function.* ***2010*** *– 2010MY The first non-V8 engined Panamera arrives in the form of the 3.6-litre V6 petrol model. Panamera V6 , is available a rear or four-wheel drive, the former available with either a six-speed manual or optional seven-speed PDK, the later is PDK only. Engine produced 300hp and 295 lb ft of torque. Standard specification is the same as a V8 engined S model, except for a tyre pressure monitoring system and a PASM suspension, which are optional.* ***2011*** *– 2012MY The Panamera Diesel arrives. 3.0-litre V6 turbocharged engine is donated by Audi. Specification on par with a V6 petrol engined Panamera. S Hybrid also added to range. Following the path of the Cayenne S Hybrid, it's fitted with a 3.0-litre supercharged petrol V6 engine connected to a 47hp, 221lb ft electric motor. Energy for the electric motor is stored in batteries fitted under the boot floor charged via the engine and regenerative sources such as braking. Full electric range is 1.2-miles and the electric motors have a 46mph maximum speed. Turbo S also arrives running a pair of turbo-chargers with lighter vanes. Peak power climbs to 550hp. Agate grey exterior paint is exclusive to the model.* ***2012*** *– 2012MY Take a Panamera 4S, fit a Porsche Exclusive bodykit and allow the engineers time with its 4.8-litre V8 on a dyno and you get the GTS. Active air intakes, reprofiled camshafts and a revised ECU extract a further 30hp from the bent-eight and an additional 15lb ft of torque. Turbo brakes are standard, as is air suspension and PASM – which is reprogrammed to be tauter. Porsche Sport Chrono Plus is also standard as is the Turbo's four-piece rear spoiler and the 19-inch alloy wheels. The chassis is 10mm lower and there 5mm spacers fitted to the rear axle. 18-way adjustable front seats and a sports steering with paddles are also standard. Four-wheel drive only with the seven-speed PDK.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
Panamera	2010 – 2013	1730	3605	300	295	6.8	162
Panamera 4	2010 – 2013	1820	3605	300	295	6.1	159
Panamera S	2009 – 2013	1770	4806	400	369	5.0	175
Panamera 4S	2009 – 2013	1860	4806	400	369	4.4	175
Panamera Turbo	2009 – 2013	1970	4806	500	516*	3.5**	188
Panamera Diesel	2011 – 2013	1880	2967	250	405	6.8	150
Panamera GTS	2012 – 2013	1920	4806	430	383	4.5	178
Panamera S Hybrid	2012 – 2013	1980	2995	380	427	6.0	167
Panamera Turbo S	2012 – 2013	1995	4806	550	553	3.8	190

* 567lb ft when in Sport Plus Mode when Sport Chrono Package Plus fitted. ** 0-60mph time

2013*– 2014MY The gen-2 Panamera gets a new front and rear bumper, new lights and side sills and a range of new engines. The interior is untouched. Out goes the 4.8-litre normally aspirated V8 for the S and 4S*



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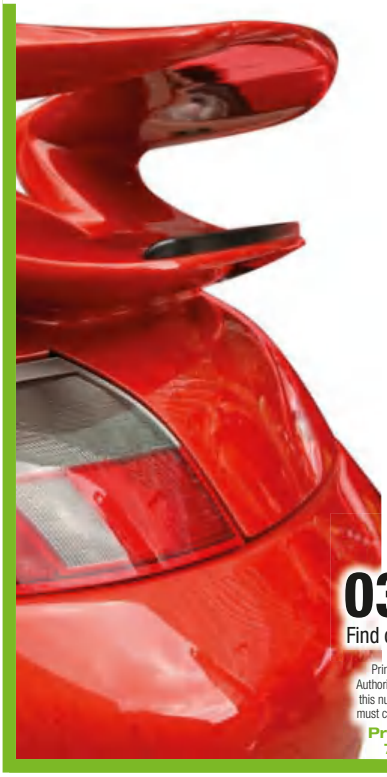
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and come with the conventional eight-speed Tiptronic S gearbox. In early 2012 the range is topped off with the GTS – a breathed on Panamera 4S with more power, a Turbo look and sport inspired interior. It's no GT3 but it's a great way to hustle nearly two tons.



918 SPYDER: 2014 – 2015

Two-door, mid-engined, petrol-electic plug-in hybrid. The supercar has evolved into the hypercar, one that combines the thoroughbred engine from an LMP2 race car with the pioneering engineering of electric motors and lightweight(ish) batteries. The 918 signals the beginning of a new dawn for Porsche, one that provides the company with a halo product on which to hang its Cayenne, Panamera, Macan and, potentially 911 hybrids from. To help the 918 along the way its launch coincides with Porsche's return to top flight sports car racing, including Le Mans, with an all-new LMP1 race car. A petrol-electric hybrid race car. The 918 has a lot to deliver, but on the eve of its launch it made an impressive debut with a sensational 6 minute 57 second lap of the Nürburgring Nordschleife.



MACAN: 2014 –

Five-door, front engined, permanent four-wheel drive compact SUV, six-cylinder turbocharged petrol and diesel engines; seven-speed PDK transmission. Built to fullfill Porsche's ambitions to build 200,000 cars by 2018 the Macan is the company's answer to Land Rover's Evoque, BMW's X3 and Mercedes GLA in the premium compact SUV sector. Porsche forcasts to build 50,000 Macans a year and will add to the range with another diesel engine – a four-cylinder this time – a petrol-hybrid and a four-clylinder petrol engine.

The Macan launches with two trim levels, the S and the Turbo. The former is available with either a twin-turbocharged V6 petrol engine or single-turbo diesel V6. The Turbo is fitted with a 3.6-litre twin-turbocharged engine. A Turbo S and GTS trim-line is expected to join the line-up, along with a more basic trim level to sit below the S models; expect this to be offered with a four-cylinder engines, both petrol and diesel.

Sitting below the Cayenne in Porsche's SUV line-up, the Macan is lighter by over 100kgs, 16cm shorter in overal length, eight centimetres lower in height and sits on a wheelbase eight centimetres shorter than the Cayennes. The Macan is usefully quicker than its big brother, too, with the petrol S model faster to 62mph than the quickest normally aspirated Cayenne, the GTS. The Macan Turbo's sprinting prowess sits neatly between the Cayenne Turbo and Turbo S. The smaller SUV is also usefully more fuel efficient and cleaner than its big brother, too.

In 2015 the Macan gets a GTS version, joining the other Porsche models in this now established sub brand. GTS sits below the Turbo model with the same three-litre V6 bi-turbo engine as the S model yet this time boasting 360hp. Torque is also increased to 368lb ft and it's lighter than the Turbo model. It is only available with a seven-speed PDK gearbox. The styling falls in line with other GTS models in Porsche's range, offering the SportDesign package as standard. Equppied with a PASM chassis that is lowered by 15 millimetres, it sits on matt black 20-inch RS Spyder design alloy wheels.

models and in comes a 3.0-litre biturbo V6 that's more powerful than the V8. Big V8 stays for the GTS and the Turbo, 3.6-litre petrol V6 still props up the range along with 3.0-litre turbo diesel. The big change is to the hybrid model. Now called the S E-Hybrid, it mates the 3.0-litre supercharged V6 with an electric motor that's twice as powerful and a battery pack that can store five times the energy. E-Hybrid is also a plug-in hybrid which means you can charge the car while at work, or at home. Other mechanical changes include the dropping of the six-speed manual - it's PDK for all the models bar the Diesel and S E-hybrid, which get the Cayenne's eight-speed Tiptronic. ***2015:*** *Panamera Edition - special version available in three styles: Edition, 4 Edition, and Diesel Edition. 4 Edition features all-wheel drive with an electronically map-controlled multi-plate clutch. High-gloss black trim, part-leather upholstery, SportDesign steering wheel. PASM, bixenon headlights with PDLS, Park Assist and Power Steering Plus all standard. China and USA variants receive comfort seating.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
Panamera Diesel	2013–	1880	2967	250	405	6.8	151
Panamera	2013–	1770	3605	310	295	6.3	160
Panamera 4	2013–	1820	3605	300	295	6.1	159
Panamera S	2013–	1810	2997	420	383	5.1	178
Panamera 4S	2013–	1870	2997	420	383	4.8	177
Panamera S E-Hybrid	2013–	2095	2995	416	435	5.5	167
Panamera GTS	2013–	1925	4806	440	383	4.4	178
Panamera Turbo	2013–	1970	4806	520	516	4.1	189
Panamera Turbo S	2013–	1995	4806	570	553	3.8	192
Panamera Edition	2015-	TBC	3605	310	TBC	TBC	TBC
Panamera 4 Edition	2015-	TBC	3605	310	TBC	TBC	TBC
Panamera Diesel Ed	2015	TBC	2967	300	TBC	TBC	TBC

918 Spyder (2014 – 2015)

918 Spyder *– Wheelbase (mm): 2730, Length/Width (mm): 4643/1940, Track front/rear (mm): 1664/1612* ***Significant developments: 2013*** *– 2014MY. 4.6-litre V8 traces its routes back to the 2007 LMP2 RS Spyder racer and runs a seven-speed PDK with drive to the rear. Then there is a 286hp electric motor fitted to the front axle with its own transmission. 918 can be driven by the petrol engine, the electric motor or a combination of the two, which results in 887hp and 944lb ft of torque (the V8 produces 676lb ft on its own). The V8 screams to 9150rpm and produces 132hp/litre. There are five driving modes: E-Power, Hybrid, Sport-Hybrid, Race-Hybrid and Hot Lap, each determines which power source is required. The chassis is a carbon-fibre monocoque, body made from the same material and includes a two-piece Targa roof. PCCB brakes are standard, 20-inch wheels at the front, 21s rear with Michelin Pilot Sport Cup 2 tyres. Available in two trim levels, Spyder and Weissach Package, the latter reduces weight by 41kg – magnesium wheels account for a 14kg saving. Other weight saving includes ceramic wheel bearings, titanium chassis bolts and brake pad supporting plates. Other upgrades include additional aero parts includeing aeroblades positioned behind rear wheels, thinner paint and exposed carbon-fibre. It's a quick Porsche - Nürburgring lap time – 6min, 57secs.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
918 Spyder	2014	1674	4593	608/286	676/944	2.6	214
918 Spyder Weissach	2014	1634	4593	608/286	676/944	2.6	214

Macan (2014 –)

Macan *– Wheelbase (mm): 2807; Length/Width (mm): 4681 (Turbo 4699mm)/1923; Track front/rear (mm): 1655/1651; Weight: 1865kg (S), 1880kg (S Diesel), 1925kg (Turbo)****: 2013*** *– 2014MY Built at Leipzig, Two petrol V6 engines, 4-cylinder turbocharged petrol engine, and V6 diesel donated by the VW. Macan S gets 340hp three-litre biturbo V6; Turbo is equipped with 400hp, 3.6-litre biturbo V6. S Diesel fitted with 3.0-litre single turbo V6 diesel engine. PTM four wheel drive running gear, drivetrain essentially rear-wheel drive sending torque load to the front axle when required. PDK as standard – no manual option – 'Off-road mode' can be selcted at speeds of up to 80kmh, this shortens gear ratios to aid traction. Auto Start/Stop standard. S model is fitted with a 65-litre fuel tank, S Diesel a 60-litre tank, the Turbo a 75-litre one. Both S models are available to order with optional 75-litre tank. Depending on tyres fitted, S returns between 31 – 32mpg on the combined cycle, Turbo 30.7 – 31.7mpg and S Diesel 44.8 – 46.3mpg. Emmissions for the three range from 150 – 157g/km for the S Diesel, 171 – 179g/km for the S and 176 – 184g/km for the Turbo. Steel springs and fixed rate dampers standard on S models, the Turbo comes with PASM as standard. All variants are avaialble with air-suspension with PASM at extra cost, providing an additional 40mm of ground clearance when driving off-road. A Sport button is fitted as standard, PTV Plus is optional, as is Sport Chrono. S models fitted with 350mm front brake discs, the Turbo 360mm, rears are 330mm and 356mm respectively. All Macan models are fitted with different size tyres front-to-rear. Narrower front tyres provide greater steering feel, wider rear tyres for optimum grip. All are fitted with electromechanical power steering. Turbo is fitted with biexnon headlights, S models with halogens. PDLS optional on all models. Three-spoke 918 Spyder-style multi-function steering wheel with paddle shift controls standard. Full length panoramic glass sunroof available, S models trimmed in partial leather and alcantara, a full leather interior a cost option. Macan offers 500 litres of luggage capacity (with the rear seats in upright position up to 1500 litres depending on the configuration).* ***2015*** *– Macan GTS added to range sitting between S and Turbo models. Uses the same three-litre V6 biturbo engine as S model with added power, PDK only, SportDesign styling package fitted as standard. New PCM makes its SUV debut in the Macan GTS.*

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
Macan	2014	1770	1984	237	258	6.9	138
Macan S	2014	1865	2997	340	339	5.4	157
Macan S Diesel	2014	1880	2967	258	427	6.3	142
Macan GTS	2015	1895	2997	360	368	5.2	159
Macan Turbo	2014	1925	3604	400	405	4.8	165

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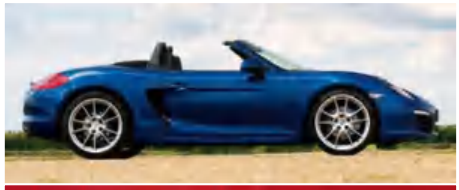
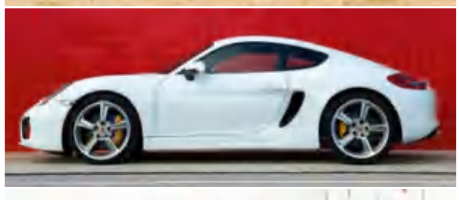
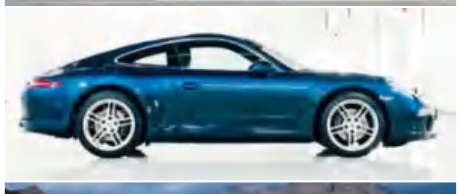
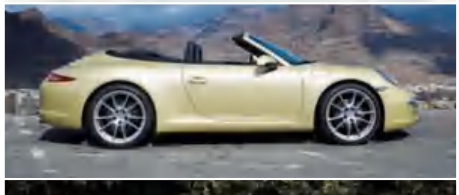
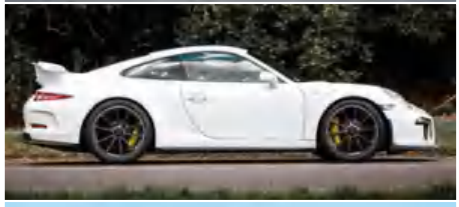
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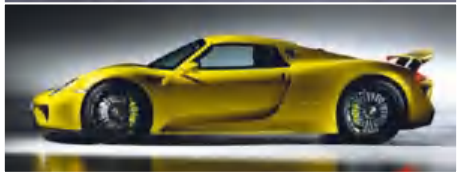
new car data

Looking for a new Porsche? You'll find all the need-to-know facts right here…

MODEL	PRICE	ENGINE	POWER	TORQUE	0-62MPH	TOP SPEED	WEIGHT
BOXSTER							
Boxster 2.7	£39,553	6cyl/2706cc	265hp	206lb ft	5.8secs	164mph	1330kg
Boxster Black	£46,164	6cyl/2706cc	265hp	206lb ft	5.8secs	164mph	1330kg
Boxster S	£47,858	6cyl/3436cc	315hp	269lb ft	5.1secs	173mph	1340kg
Boxster GTS	£53,872	6cyl/3436cc	330hp	276lb ft	5.0secs	174mph	1345kg
Boxster Spyder	£60,459	6cyl/3800cc	375hp	310lb ft	4.5secs	180mph	1315kg
CAYMAN							
Cayman 2.7	£39,694	6cyl/2706cc	275hp	213lb ft	5.7secs	165mph	1330kg
Caymann Black	£45,989	6cyl/2706cc	275hp	213lb ft	5.7secs	165mph	1330kg
Cayman S	£48,783	6cyl/3436cc	325hp	272lb ft	5.0secs	175mph	1340kg
Cayman GTS	£55,397	6cyl/3436cc	340hp	279lb ft	4.9secs	177mph	1345kg
Cayman GT4	£64,451	6cyl/3800cc	385hp	310lb ft	4.4secs	183mph	1340kg
911 COUPÉ (991)							
New 911 Carrera	£76,412	6cyl/2981cc	370hp	332lb ft	4.2secs	183mph	1430kg
911 Carrera Black	£75,074	6cyl/3436cc	350hp	287lb ft	4.8secs	179mph	1380kg
New 911 Carrera S	£85,857	6cyl/2981cc	420hp	369lb ft	3.9secs	191mph	1440kg
911 Carrera GTS	£91,098	6cyl/3800cc	430hp	325lb ft	4.4secs	190mph	1425kg
New 911 Carrera 4	£81,398	6cyl/2981cc	370hp	332lb ft	4.1secs	181mph	1480kg
911 Carrera 4 Black	£79,309	6cyl/3436cc	350hp	287lb ft	4.9secs	175mph	1430kg
New 911 Targa 4	£90,240	6cyl/2981cc	370hp	332lb ft	4.3secs	179mph	1570kg
New 911 Carrera 4S	£90,843	6cyl/2981cc	420hp	369lb ft	3.8secs	189mph	1490kg
911 Carrera 4 GTS	£95,862	6cyl/3800cc	430hp	325lb ft	4.4secs	188mph	1470kg
New 911 Targa 4S	£99,684	6cyl/2981cc	420hp	369lbft	4.0secs	188mph	1580kg
911 Targa 4 GTS	£104,385	6cyl/3800cc	430hp	325lb ft	4.7secs	188mph	1555kg
911 GT3	£100,540	6cyl/3799cc	475hp	325lb ft	3.5secs	196mph	1430kg
911 GT3 RS	£131,296	6cyl/3996cc	500hp	339lb ft	3.3secs	192mph	1420kg
911 Turbo	£120,598	6cyl/3800cc	520hp	486lb ft	3.4secs	195mph	1595kg
911 Turbo S	£142,120	6cyl/3800cc	560hp	516lb ft	3.1secs	197mph	1605kg
911 CABRIOLET (991)							
New 911 Carrera	£85,253	6cyl/2981cc	370hp	332lb ft	4.4secs	181mph	1500kg
911 Carrera Black	£81,852	6cyl/3436cc	350hp	287lb ft	5.0secs	177mph	1470kg
New 911 Carrera S	£94,698	6cyl/2981cc	420hp	369lb ft	4.2secs	180mph	1520kg
911 Carrera GTS	£99,602	6cyl/3800cc	430hp	325lb ft	4.6secs	188mph	1495kg
New 911 Carrera 4	£90,240	6cyl/2981cc	370hp	332lb ft	4.3secs	179mph	1550kg
911 Carrera 4 Black	£86,125	6cyl/3436cc	350hp	287lb ft	5.1secs	175mph	1500kg
New 911 Carrera 4S	£99,684	6cyl/2981cc	420hp	369lb ft	4.0secs	188mph	1560kg
911 Carrera 4 GTS	£104,385	6cyl/3800cc	430hp	325lb ft	4.7secs	183mph	1515kg
911 Turbo	£129,223	6cyl/3800cc	520hp	486lb ft	3.5secs	195mph	1665kg
911 Turbo S	£150,897	6cyl/3800cc	560hp	516lb ft	3.2secs	197mph	1675kg
CAYENNE							
Cayenne	£49,576	6cyl/3598cc	300hp	295lb ft	7.7secs	143mph	2040kg
Cayenne Diesel	£50,441	6cyl/2967cc	262hp	428lb ft	7.3secs	137mph	2110kg
Cayenne S	£60,845	6cyl/3604cc	420hp	406lb ft	5.5secs	160mph	2085kg
Cayenne S Diesel	£62,099	8cyl/4134cc	385hp	627lb ft	5.4secs	156mph	2215kg
Cayenne E-Hybrid	£62,099	6cyl/2995cc	416hp	435lb ft	5.9secs	150mph	2350kg
Cayenne GTS	£72,523	6cyl/3604cc	440hp	443lb ft	5.2secs	163mph	2110kg
Cayenne Turbo	£93,574	8cyl/4806cc	520hp	553lb ft	4.5secs	173mph	2185kg
Cayenne Turbo S	£118,455	8cyl/4806cc	570hp	590lb ft	4.1secs	176mph	2235kg
PANAMERA							
Panamera Diesel	£65,289	6cyl/2967cc	300hp	479lb ft	6.0secs	160mph	1880kg
Panamera	£63,913	6cyl/3605cc	310hp	295lb ft	6.3secs	160mph	1770kg
Panamera 4	£67,474	6cyl/3605cc	310hp	295lb ft	6.1secs	159mph	1820kg
Panamera S V6	£82,439	6cyl/2997cc	420hp	383lb ft	5.1secs	178mph	1810kg
Panamera 4S V6	£86,080	6cyl/2997cc	420hp	383lb ft	4.8secs	177mph	1870kg
Panamera S E-Hybrid	£84,401	6cyl/2995cc	416hp	435lb ft	5.5secs	167mph	2095kg
Panamera GTS	£93,391	8cyl/4806cc	440hp	383lb ft	4.4secs	178mph	1925kg
Panamera Turbo	£108,006	8cyl/4806cc	520hp	516lb ft	4.1secs	189mph	1970kg
Panamera Turbo S	£131,152	8cyl/4806cc	570hp	553lb ft	3.8secs	192mph	1995kg
MACAN							
Macan	£41,578	4cyl/1984cc	237hp	258lb ft	6.9secs	138mph	1770kg
Macan S	£44,650	6cyl/2997cc	340hp	339lb ft	5.4secs	157mph	1865kg
Macan S Diesel	£44,636	6cyl/2967cc	258hp	427lb ft	6.3secs	142mph	1880kg
Macan GTS	£55,188	6cyl/2997cc	360hp	368lb ft	5.2secs	159mph	1895kg
Macan Turbo	£60,994	6cyl/3604cc	400hp	405lb ft	4.8secs	165mph	1925kg
918 SPYDER							
918 Spyder	€781,155	8cyl/4593cc	894hp	944lb ft	2.6secs	214mph	1674kg
918 Spyder Weissach	€853,155	8cyl/4593cc	894hp	944lb ft	2.6secs	214mph	1634kg





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specialist directory

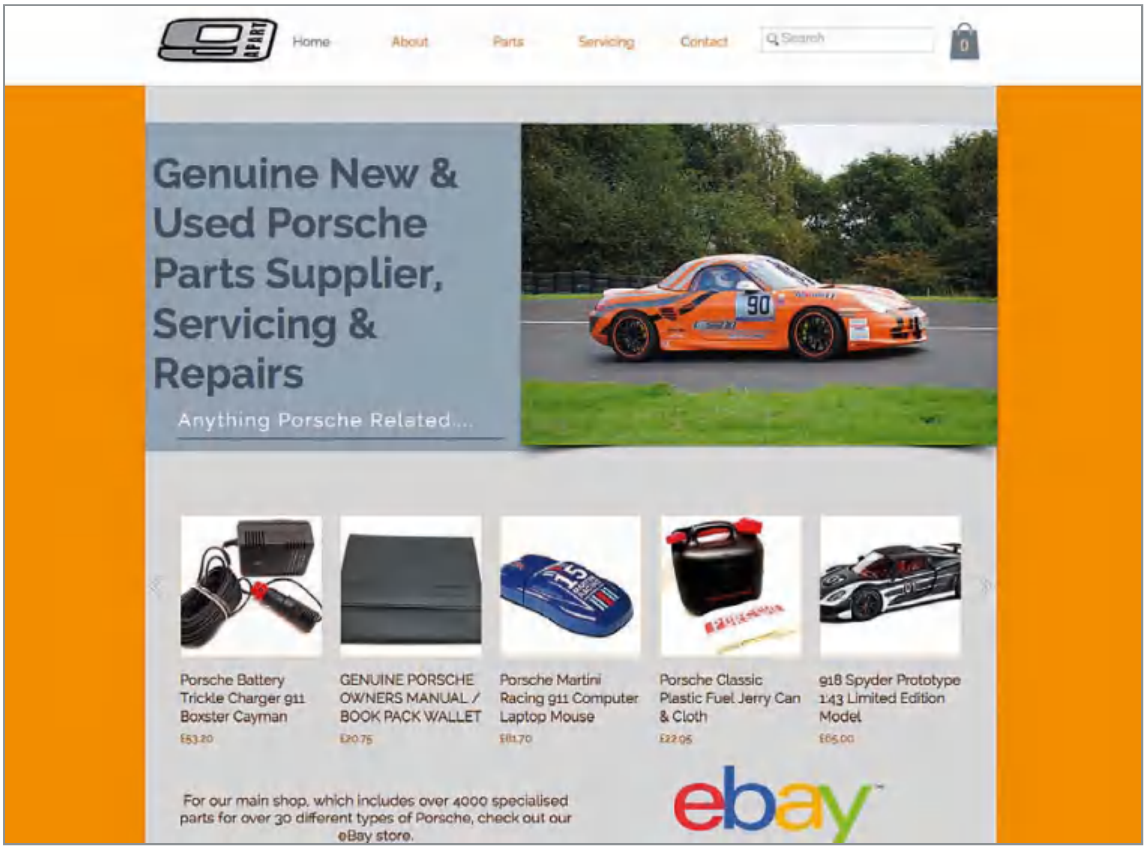
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Adrian Flux Tel: 0800 081 8989 www.adrianflux.co.uk											✓					
AmD Tel: 01869 323205 www.amdtechnik.com																
Analogue Automotive Tel: 01730 892220 www.analogueautomotive.co.uk	✓	✓	✓	✓		✓	✓	✓	✓	✓			✓	✓	✓	✓
Ashley Insurance Tel: 01785 214444 www.ashleyinsurance.co.uk									✓							
Autofarm Tel: 01865 331234 www.autofarm.co.uk	✓	✓				✓		✓			✓		✓			
Autostrasse Tel: 01376 562922													✓			
Berlyn Services Tel: 01271 866818 www.berlyn-services.co.uk	✓															
Belgravia Garage Tel: 0207 2359900 www.belgraviagarage.com													✓			
Bilstein www.bilstein.com														✓		
Blackboots Tel: 01494 797820 www.blackboots.co.uk							✓						✓			✓
Bodytechnics Tel: 01753 505911 www.bodytechnics.co.uk The bodyshop for prestige vehicles. Porsche Centre approved body repairer		✓														
Brian Miller Motors Tel: 0131 443 7806													✓			
Cameron Sportscars Tel: 01220 892244													✓			
Carrera Engineering Tel: 01992 892333 www.carreraengineering.co.uk			✓			✓	✓	✓						✓		
Cargraphic Tel: 0049 634 188 088 (D) 01293 537911 (UK) www.cargraphic.com	✓		✓			✓	✓			✓	✓			✓		✓
Charles Ivey Specialist Cars Tel: 020 77313612 www.charlesivey.com	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓		✓
Chesterfield Diagnostics/Repairs Tel: 01246 234046 www.chesterfielddiagnostics.com	✓		✓	✓		✓	✓	✓		✓	✓		✓	✓		✓
Classic Additions Tel: 01938 561717 www.classicadditions.com	✓															
Club Auto Sport Ltd Tel: 01384 410879 www.clubautosport.co.uk	✓					✓								✓		
CMSPorsche Tel: 01952 608911	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓		✓
Dansk Tel: 07000 911993							✓									
Design 911 Tel: 0208 500 881 www.design911.com	✓	✓	✓				✓	✓		✓			✓	✓		✓
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Green Flag Tel: 0845 246 2130 www.greenflag.com									✓							
GT One Ltd Tel: 01932 569911/944 www.gt-one.co.uk													✓			
Hartech Tel: 01204 302809 www.hartech.org Firewood Works, Firwood Ind. Est, Thicket Ford Road, Bolton, BL2 3TR						✓					✓		✓			
Historika Classica Porsche 07836 384999 www.historika.com	✓							✓					✓			
HP Motorsports Tel: 020 8500 2510 www.hpmotorsports.co.uk													✓			
Jasmine Porschalink UK Tel: 01282 697171 www.jasmine-motorsport.co.uk	✓	✓	✓			✓	✓			✓	✓	✓	✓	✓		✓
Jaz Tel: 020 8903 1118 www.jazweb.co.uk	✓		✓			✓	✓	✓			✓		✓	✓	✓	✓
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9-Apart

9-Apart in Bury is a global Porsche parts and servicing specialist catering for over 30 different models…

***GT:* How long have you been established and how did you get started?**
9-Apart Limited was established in 1999. We had been running it as a hobby since 1992 and we built-up our business from there.

***GT:* Who is in charge and what is their background?**
Simon Butterworth, who has been a Porsche enthusiast since 1985 and a Porsche owner since 1988. Simon visited Porsche autojumbles in the 1980s and 1990s and started buying and selling parts. The business went full-time in 1999. The rest is history.

***GT:* Tell us a little about the products and services you offer?**
We provide new and used Porsche parts, a worldwide mail order service, we offer technical advice, and full workshop facilities. Our 18,000sq ft warehouse contains masses of parts in stock at all times. We cater for all Porsche models from 1963 to present day, and pride ourselves on our competitive discount prices. Our eBay store boasts almost 26,000 transactions with a 99.9% positive feedback rating.

***GT:* What do you think your potential customers are looking for in an independent specialist such as yourselves?**
Above all else our customers are looking for quality, good customer service, and value for money. They want a reliable support service. With our knowledge and experience, that's exactly what we deliver.

***GT:* What facilities do you have on site?**
We have state-of-the-art workshop facilities, including two vehicle ramps and full Porsche diagnostic capabilities. In addition, we have access to any parts required from our own extensive stock. We also have tyre changing and wheel balancing facilities, we can rewaterproof soft-tops and even rebuild air- and water-cooled Porsche engines.

***GT:* What is your USP?**
40 years of combined Porsche experience, an 18-year affiliation with the brand, and the connections we have forged with product suppliers. We pride ourselves on our strong customer values, tailoring the customer experience to individual needs, building trust with honesty. We use genuine Porsche parts, and our backup support and direct point of contact is excellent. And, of course, we're a family business which gives 9-Apart a unique feel.

***GT:* Which Porsches do you cater for?**
We cater for all Porsche cars, both air- and water-cooled.

***GT:* What is your background with the Porsche brand?**
We have 40 years of combined parts experience specific to Porsche.

***GT:* How many staff do you employ at your company?**
We have ten full time staff all of whom offer our customers excellent service.

***GT:* What exciting new products or services should we expect from you soon?**
We strive to hold greater stock here on site year-on-year; we are in a position to do this because of our warehouse. By doing this it enables us to meet our customer's requirements quickly.

***GT:* Lastly, what is your opinion on the current state of the Porsche market and how have things changed since your business was founded?**
The links between Porsche, Audi and VW has been good for business. Our business started when there was only the 911, 928, 944 and 924, so we've seen the birth of all the new generations of water-cooled sports cars and SUVs. The Porsche market has really expanded ten-fold since the start of our business ○

Contact information
9-Apart
Telephone: 01706 824053
Web: www.9apart.co.uk

	Accessories & Parts	Bodyshops	Brakes	Car Care	Car Clubs	Engine	Exhausts	Inspection	Insurance	Interiors	Manufacturers & Tuners	Memorabilia	Sales & Servicing	Suspension	Track days	Wheels & Tyres
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LN Engineering Tel: +1 815 472 2939 www.lnengineering.com						✓										
Loe Bank Motors Tel: 01706 826060 www.loebankmotors.co.uk													✓			
Meguiar's Tel: 0870 2416696 www.meguiars.co.uk				✓												
Milltek Sport Tel: 0115 944 0044 www.millteksport.co.uk							✓									
Ninemeister Tel: 01925 242342 www.ninemeister.com	✓	✓	✓			✓	✓				✓		✓	✓	✓	✓
No 5 Garage Tel: 020 8993 7318 www.no5garage.com													✓			
Northway Porsche Specialists Tel: 0118 971 4333 www.northway.co.uk													✓			
Parr Motorsport Tel: 01293 537911 www.parr-uk.co.uk	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓	✓
Paragon Tel: 01825 830424 www.paragon.gb.com	✓	✓	✓			✓	✓				✓		✓	✓		✓
Paul Stephens Specialist Cars Tel: 01440 714884 www.paul-stephens.com											✓		✓			
PCT Cars Ltd Tel: 02476 407770 www.pctcars.co.uk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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Performance Direct Tel: 0844 5733594 www.performancedirect.co.uk									✓							
Performance Marque Tel: 0800 954 0037 www.performancemarque.com									✓							
Peter Morgan Consulting Tel: 01672 514038 www.porscheinspections.com								✓								
Pie-Performance Tel: 01473 760911 www.pieperformance.co.uk	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓
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Porsche Cars GB Tel: 0845 7 911 911 www.porsche.co.uk											✓					
Porsche Club GB Tel: 01608 652911 www.porscheclubgb.com					✓							✓				
Porscheworx Tel: 020 7916 6911		✓									✓		✓			
PortiaCraft Tel: 020 8959 1604													✓			
911 Virgin Tel: 01895 255222 www.911virgin.com													✓			
Pro 9 Tel: 01527 591992 www.pro-9.com.uk			✓											✓		
Promax Motorsport Tel: 01296 714856 www.promaxmotorsport.com	✓										✓		✓			
PR Services Tel: 01277 630099 www.prs356.com		✓											✓			
Ramus Porscha Tel: 0121 55 77 911 www.ramusporscha.com	✓	✓			✓	✓			✓		✓			✓		✓
Regal Autosport Tel: 02380 558636 www.regal-auto.co.uk											✓					
Redline Racing Tel: 01642 751911											✓					
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Tech9 Motorsport Tel: 0151 4255 911 www.tech9.ms	✓	✓	✓			✓	✓			✓	✓		✓	✓	✓	✓
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TWG Motorsport Tel: 01733 332911													✓			
The Wheel Restorer Tel: 01978 352980 sales@thewheelrestorer.co.uk Unit F7, Bersham Enterprise Centre, Rhostyllen, Wrexham LL14 4EG																✓
Yorkshire Classic Porsche Tel: 08434 996 911 www.yorkshireclassicporsche.co.uk	✓	✓	✓	✓			✓	✓		✓		✓	✓			✓



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porsche moments

by Colin Goodwin



A motoring journalist for over 25 years, Colin has contributed to GT Porsche *for a decade*

After helping refit the engine into a 912, Colin Goodwin may finally get the point of the classic four-cylinder Porsche…

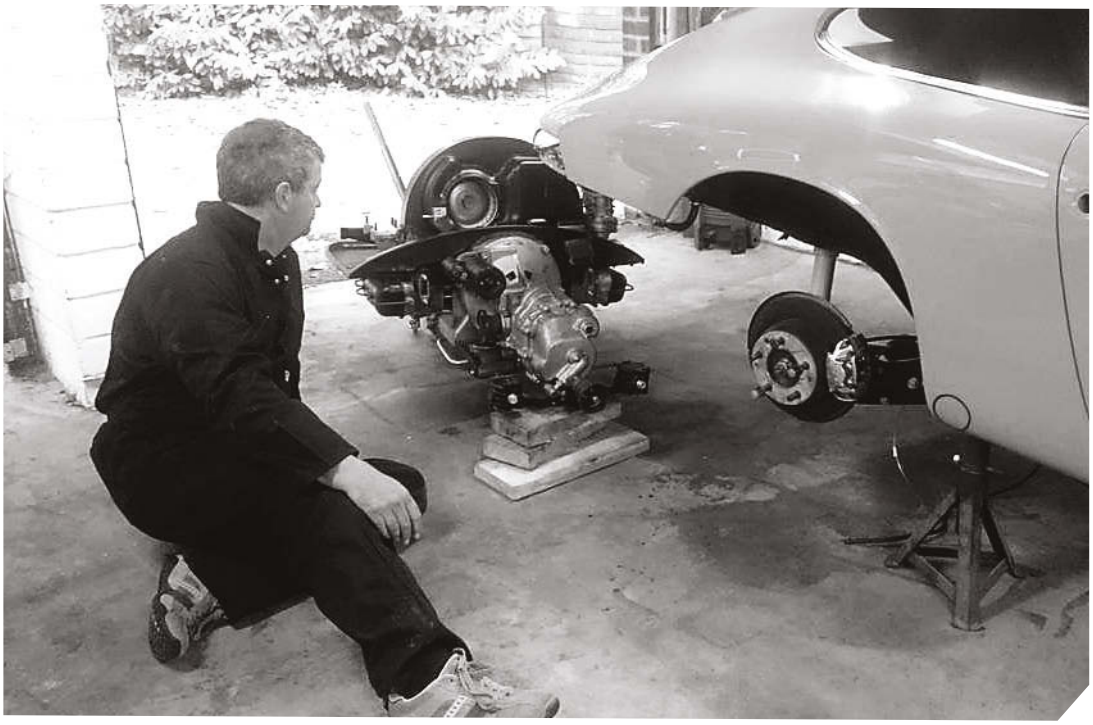
What a coincidence. The magazine runs a feature on the 912 no more than a week after I have my first experience of Porsche's four-pot 911. Not driving one, lying underneath one…

Accompanying the feature on owning a 912 were photographs taken by James Lipman of a bare 912 shell ready for paint. Jamie owns the car himself and since those pics were taken it's been painted, fitted with its suspension and had most of its interior fitted. Next job: fitting the engine. Even after 40 years of messing around with cars and bikes I still love getting my hands dirty so I volunteered to help Lipman fit the 912's freshly rebuilt and very clean engine.

There's probably a record for fitting a 912 engine and transmission and it's bound to be something ridiculous like a minute. It took Jamie and I a little bit longer. First, we had to stare at the car for a bit while we drank a couple of mugs of coffee. Second, we had to assemble a good supply of wooden blocks of various dimensions to use as props because we only had one set of axle stands and one trolley jack.

It's one thing fitting an engine, it's another doing so without chipping fresh paint or bending tinware so it's best not to rush. We had to adjust the height of the axle stands because there wasn't enough clearance between the top of the motor and the car's rear panel – a pain because the engine and 'box were on the jack – but fortunately one man can lift the back on an engine-less 911 so that's what we did.

The biggest phaff is to get all the wires and cables out of the way. We had to bend a brake line a few millimetres so that it cleared the transmission casing but otherwise it was straightforward. Lipman's car has a few non-standard bits like a Weevo side case on the gearbox and Weevo engine mounts but nothing that made fitting the engine harder. After about 20 minutes of jiggling we had it in. A celebratory sarnie and more coffee while Lipman tweets a photo of me in the engine bay with the comment 'Goodwin 'feels dirty' fitting four-cylinder engine but does it anyway.' That was brought on by several years of me taking the mickey out of Lipman for selling a lovely early 911 and replacing it with a 912.



"I think I now get the point of the 912. Not the economic benefits, more the physics."

But I think the worm might have turned and I now get the point of the 912. Not the economic benefits, more the physics. While wiggling and nudging the powertrain into position I was struck by how much flat tinware there is between the back of the engine and the rear panel of the car. That, and according to Lipman an engine that's half the weight of a six-cylinder, must mean a really nice balance. I'm now looking forward to driving the car and might offer further free labour to quicken its completion.

This recent 912 experience both in the metal and on paper (when reading the drive feature) has got me thinking about the upcoming new Cayman and Boxster. Ever since Porsche announced the next generation's spec I've been moaning about a four-cylinder engine with turbocharging, but what if this car is both lighter and has an even nicer balance than the six-cylinder cars? It's pretty likely that it will be lighter, that's for sure. The word inside Porsche is that the car is pretty special. From another manufacturer that comment could be tossed aside but Porsche's people tend to be straight talking when it comes to engineering ○

The views of the author are not necessarily shared by the magazine.

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